ALSO IN OUR NEWS SECTION ■ After years of ignoring it, EMC decides tape storage has a role to play after all. PAGE 4
■ Computerworld Honors: Demonstrating how IT can advance democratization. PAGE 14

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JUNE 14, 2004 VOL. 38 NO. 24 [illegible] COPY

J.P. Morgan Chase to Scale Back Outsourcing Pact

Bank One buy affects IBM deal, sources say

BY THOMAS HOFFMAN

J.P. Morgan Chase & Co. plans to bring most of the IT activities it now outsources to IBM back in-house as part of its $58 billion acquisition of Bank One Corp., according to sources within and close to the financial services firm.

New York-based J.P. Morgan Chase last year transferred management of its data processing infrastructure and about 4,000 IT workers and contractors to IBM under a seven-year, $5 billion outsourcing contract that was signed in late 2002 [QuickLink 35388].

ONLINE
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But an IT manager at J.P. Morgan Chase who requested anonymity said the bank plans to begin talks aimed at restructuring the agreement with IBM once the financial aspects of the Bank One acquisition are completed — a step that's due to take place next month.

"IBM will probably hold on to some of the services, but the bulk of the work will be brought back in," the

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EDI: Alive and Well After All These Years

Transactions increase, despite XML option

BY CAROL SLIWA

Don't believe reports you might hear about the death of electronic data interchange. Not only is EDI alive more than 20 years after its birth, it's also thriving at companies that use it to exchange purchase orders, invoices and other information with trading partners.

Retailers such as Wal-Mart Stores Inc., J.C. Penney Co., Supervalu Inc. and Hallmark Cards Inc. delivered that message loud and clear to a packed session at the recent UConnect Conference in Anaheim, Calif., sponsored by Uniform Code Council Inc.

And the majority of over 20 respondents to a *Computerworld* poll last week echoed those sentiments. Most said they're either adding new trading partners or increasing the number of EDI transactions they do. They also noted that they expect that trend to continue, even though some

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THE TOP 5

1. American Fidelity Corp.
2. University of Miami
3. Vision Service Plan
4. J.B. Hunt Transport Services Inc.
5. Qualcomm Inc.

AMERICAN FIDELITY CORP.

FEDEX CORP

GENERAL MILLS INC

UNIVERSITY OF MIAMI

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VISION SERVICE PLAN

Lap pools and take-home meals are nice. But this year's survey of nearly 17,000 IT employees found that, once again, the most-desired benefits include technology, training and flexible work schedules. Our 11th annual special report shows how Computerworld's top 100 IT employers give workers the job fulfillment they seek. **Stories begin on page 21.**

BEST PLACES to WORK IN IT

ONLINE EXCLUSIVE | For a full list of the 100 Best Places, sortable by key categories, including region, visit our Web site **QuickLink a4610** or **www.computerworld.com**

Microsoft

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"Instead of putting out fires, we now focus on ways we can deploy new technologies that benefit our customer service."

Dave Chacon
Manager, Technical Services, *PING*

Microsoft Windows Server System makes it easier for golf club maker PING to manage the infrastructure serving their 400 end users. Here's how. By using Windows Server 2003 with Active Directory,® PING now centrally manages all its servers, desktops, and end users from one location. This cut annual administrative time by 800 hours. Time that can now be spent developing new ways to support customers, partners, and employees. Software that's easier to manage is software that helps you do more with less. Get the full PING story at **microsoft.com/wssystem**

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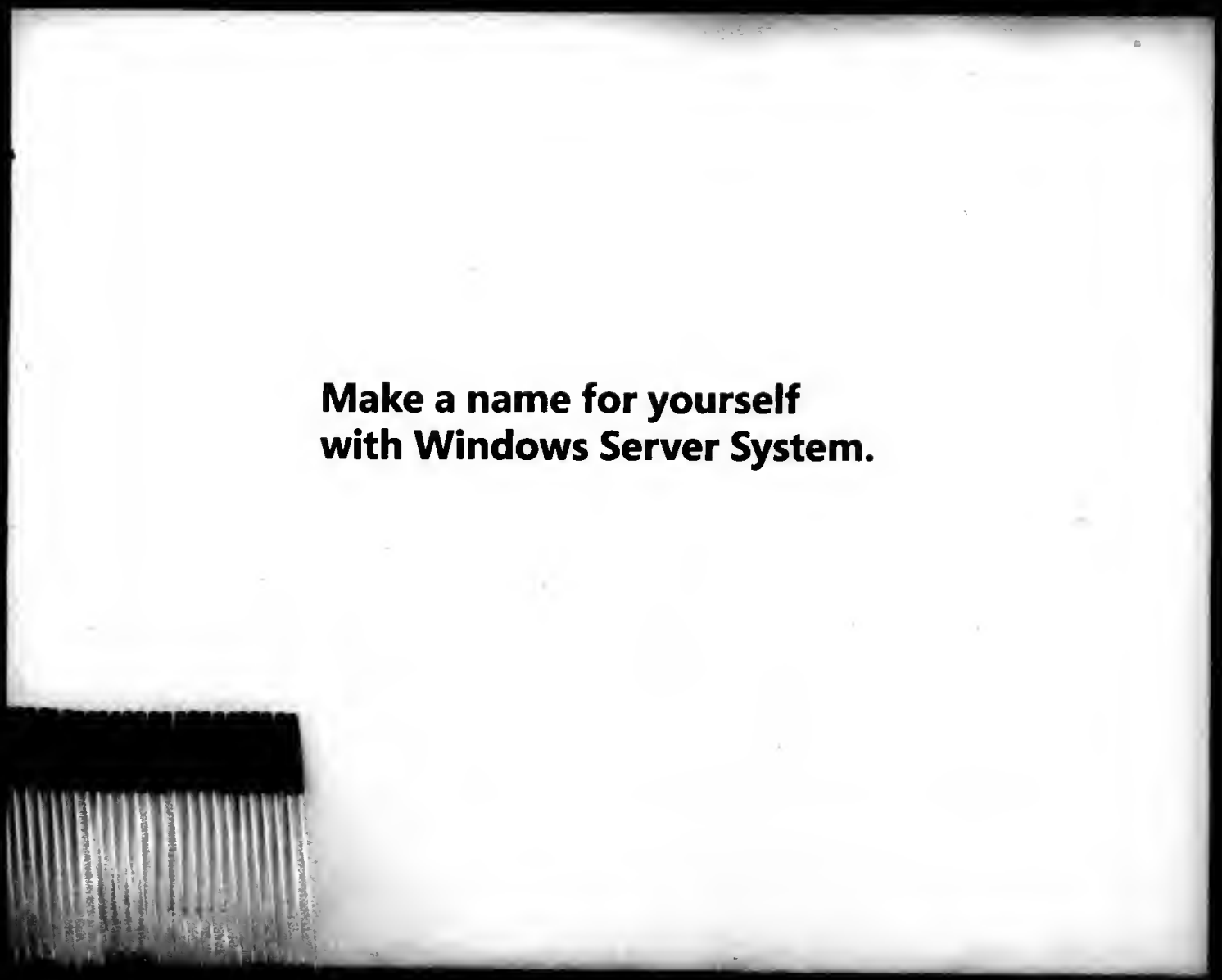

Windows
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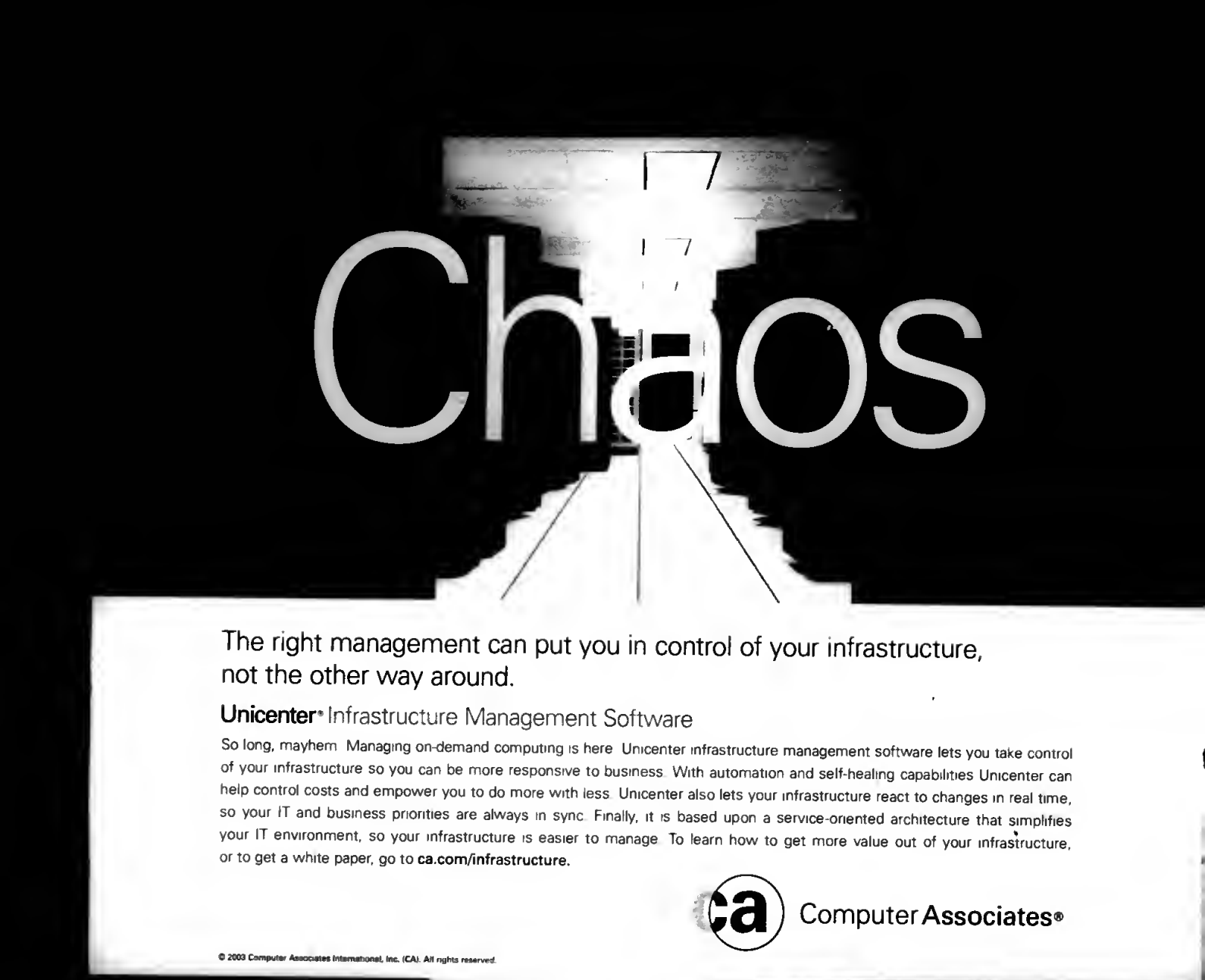

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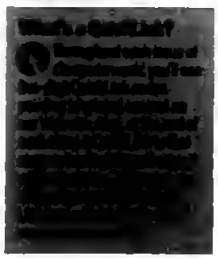

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COMPUTERWORLD **100 BEST PLACES TO WORK IN IT 2004**

Imaginative perks sweeten the pot. But harder-to-achieve basics like cutting-edge technologies, personal investment and a sense of fulfillment are what make IT workers stay put in a changing economy. This year's Best Places to Work have figured out how to give employees substance along with the frills. **Package begins on page 21.**

The Top 3. These top-ranked companies have learned that a combination of generous benefits and challenging assignments can blossom into increased worker productivity and creativity — and give employees strong roots.

28 IT staffers at No. 1 American Fidelity average 46 hours of training each year. That, plus benefits like massages and kickboxing classes, makes it a great place to work.
→ CIO JOHN SCHILLE

29 The University of Miami secured the No. 2 spot by offering employees great training, excellent benefits and a breadth of work that few companies can match.
→ TIM RAMLAY, JOYCE BRODBECK AND RISHI GANDA

30 New technology projects at No. 3 Vision Service Plan keep IT employees excited about their work. And recent activities like a recent chili contest keep morale high.
→ MARITES HOFFMAN AND STEVE SCOTT

32 Round-the-Clock IT: As globalization, speed to market, and 24-hour help desks and data centers have grown more common, running a 24/7 IT department has become a business norm. Here's how some top companies reward their round-the-clock employees.

33 International IT: As U.S.-based employers expand operations worldwide, some IT workers are gaining the benefits of new challenges and career opportunities overseas that stretch their work and life experiences.

34 100 Best Places to Work in IT: See the full list of the top 100 companies, sorted by overall ranking with information about training, staff turnover and promotions. Plus, read how we conducted this year's survey.

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AT DEADLINE

U.S. CERT, Oracle Warn of Apps Flaw

The U.S. Computer Emergency Readiness Team (CERT) issued an alert about a SQL-related vulnerability in Oracle Corp.'s E-Business Suite applications. The flaw could be exploited to run unauthorized procedures within Oracle databases that support the applications. In its own advisory, Oracle gave the flaw its highest severity rating and "strongly" recommended that users install newly released software patches.

SCO Hit by Drop in Licensing Deals

The SCO Group Inc. said revenue in its second quarter fell by more than 50% year over year to $10.1 million, due largely to a steep drop in Unix source-code licensing fees. Licensing revenue totaled just $11,000 in the quarter, which ended April 30. That was down 99% from last year's second quarter, when SCO signed licensing deals with Microsoft Corp. and Sun Microsystems Inc.

Bert Young, SCO's chief financial officer, said it's hard to convince corporate users to license the SCOsource Unix technology while the Lindon, Utah-based company's Linux-related legal battles with IBM and other vendors continue. The licensing business "is going to be very cyclical," Young said during a teleconference. "It's going to be up; it's going to be down." SCO said it lost $9.4 million in the second quarter.

IBM Sued Over Privacy Language

Zero-Knowledge Systems Inc., a software vendor in Montreal, filed a lawsuit in a Quebec court charging IBM with copyright violations and breach of contract. The suit involves the Enterprise Privacy Authorization Language, a programming language that IBM announced last July [QuickLink 39788]. IBM wouldn't comment on the suit, which seeks an injunction blocking EPAL licensing.

EMC Warms Up to Tape, Signs Resale Agreement

Storage vendor plans to offer ADIC's tape library line for use in ILM systems

BY LUCAS MEARIAN

After years of telling users that tape drives weren't an important part of storage architectures, EMC Corp. last week put to rest months of speculation and announced that it will resell tape libraries made by Advanced Digital Information Corp.

At a meeting with financial analysts in New York, EMC officials said the company plans to start offering ADIC's products to users next month. They added that although the growth of the tape library market has flattened, the technology is still useful as part of an overall information life-cycle management (ILM) strategy.

"We've indicated very clearly that disk-based technologies continue to push down to where tape has been," said Howard Elias, EMC's executive vice president of corporate marketing. "[But] tape will still play a role for nonactive archiving or infrequently accessed data."

EMC plans to offer ADIC's full line of libraries, topped off by the Redmond, Wash.-based company's Scalar i2000 and Scalar I0K models with linear tape open drives. Elias said EMC's ControlCenter storage management software can already be used with ADIC's products for some tasks, such as automatic discovery and monitoring.

Increasing Integration

ControlCenter has similar ties to tape libraries from Storage Technology Corp. and other vendors. EMC eventually plans to more tightly integrate the software with the ADIC libraries so it can automatically migrate data between tape storage and disk arrays as part of ILM installations, Elias said. But he didn't say when the tighter links would be available.

John Halamka, CIO at longtime EMC customer CareGroup Inc. in Boston, is also a StorageTek user, so he isn't interested in ADIC's products. But he said that the inclusion of tape libraries in EMC's product portfolio should help simplify the decision-making process for users.

"I feel very strongly about this: You need a general contractor for storage," Halamka said. "The idea of saying, 'I'm going to buy this box from EMC and that piece of backup software from Veritas and this tape library from whoever,' and getting it to work all together is a real challenge."

> **"I feel very strongly about this: You need a general contractor for storage."**
>
> JOHN HALAMKA CIO CAREGROUP

EMC made the reseller announcement with little fanfare, slipping it in among a full day's worth of strategy briefings and announcements centered around earnings projections. But some EMC watchers were relieved that the company finally made a decision to go ahead with the tape library deal after the long buildup.

"Thank goodness it's over. It's almost anticlimactic," said Diane McAdam, an analyst at Data Mobility Group LLC in Nashua, N.H. McAdam said she doesn't think the agreement adds a lot of value for EMC users. But it does give tape storage a vote of confidence. "EMC didn't think tape was an appropriate storage medium," she said. "Now they're saying tape is bere to stay as a storage option."

As part of the deal, ADIC will resell EMC's Clariion midrange arrays as part of its Pathlight VX system, which links and integrates disk arrays with ADIC's tape libraries. **47493**

PEPSICO inherited multiple ERP systems through acqusitions

PepsiCo Standardizes on SAP

BY STACY COWLEY

PepsiCo Inc. confirmed last week that it will standardize its global consumer goods empire on the mySAP Business Suite from SAP AG.

Purchase, N.Y.-based PepsiCo doesn't have a companywide ERP system, said spokesman Mark Dollins. Units that it built through acquisition, such as Frito-Lay, Tropicana and Gatorade, are still running the business applications they selected as independent companies.

PepsiCo decided to move to one ERP system to better integrate its operations and began evaluating vendors several months ago. SAP won the contract because of its extensive history in the consumer goods market, Dollins said.

PepsiCo is tight-lipped about its ERP plan. The company declined to disclose the budget for the project, and Dollins said the scope and sequence of the rollout is still being determined. "All we can say at this point is that we expect it to be a multiyear project," he said.

Heading the initiative is PepsiCo's vice president of enterprise systems, George Legge.

SAP will displace some of its competitors in PepsiCo's infrastructure — most notably Oracle Corp., which counts Pepsi-Cola North America, Frito-Lay and Tropicana as users of its ERP applications. PeopleSoft Inc.'s software runs PepsiAmericas Inc.'s CRM system, and Siebel Systems Inc. powers that of Quaker Oats. Also in the mix are a number of applications from smaller vendors as well as a profusion of custom systems.

PepsiCo has tried to streamline its systems before: In 1999, it created the Plano, Texas-based PepsiCo Business Solutions Group as a central IT organization. Five years later, the company still has a fragmented technology infrastructure.

Although Legge will lead the SAP initiative, the PepsiCo Business Solutions Group will be involved, Dollins said, as will CIO Tom Trainer, who joined PepsiCo last year.

Dollins declined to comment on the displacement of systems from SAP's rivals. PepsiCo's intention is to standardize on SAP, but it hasn't yet worked out the details of the implementation's timeline and extent, he said. **47481**

Cowley writes for the IDG News Service.

Stratus Shifts High-End Servers From PA-RISC to Intel

New ftServer V Series will cost about 30% less

BY PATRICK THIBODEAU

Fault-tolerant server maker Stratus Technologies Inc. is moving its proprietary VOS operating system to a new line of lower-cost, Intel-based servers.

VOS had previously been offered only on its high-end Continuum line, which is based on Hewlett-Packard Co.'s PA-RISC processor. HP's plan to phase out its PA-RISC chip is one reason for the shift to Intel, but Stratus' move was prompted mainly by customer demand for Intel's cost and architecture advantages, company officials said.

Pricing on the Continuum line starts at about $225,000. The new Intel-based systems, dubbed the ftServer V Series, will cost about 30% less. The lower cost will be accompanied by performance gains made possible by the multithreaded design of the Intel chips, Stratus said.

Bill Morgan, executive vice president and CIO of the Philadelphia Stock Exchange, plans to phase out his Continuum systems and put in V Series servers when they're made available this summer. The exchange uses Continuum systems for order processing, handling as many as 25,000 messages per second. But a new options trading system, Morgan said, may boost that demand threefold.

Morgan said the stock exchange is shifting to the V Series in order to achieve the needed performance boost, rather than adding Continuum servers and growing the architecture horizontally. "The bigger issue with that is we would have to make a lot of design and coding changes to our applications, which we would rather not do," Morgan said. The V Series uses a faster processor and is more vertically scalable, he added.

Officials at Maynard, Mass.-based Stratus said the company will continue selling the Continuum systems based on PA-RISC for as long as five more years and will support the line for at least another 10 years beyond that. "There is no artificially forced move," said Jon Malinsky, business

STRATUS' ftServer V Series

line manager for the Continuum server.

HP's NonStop fault-tolerant systems, the former Tandem line that's based on a MIPS processor, will be shifted to Intel's 64-bit Itanium sometime in 2005. HP will make the MIPS-based servers available for four to five more years and, like Stratus, will support them for at least another decade after that. "It's incumbent on us to deliver support for that for the very long term," said Randy Meyers, director of NonStop education and technology at HP. Although HP is taking the 64-bit route, Stratus maintains that for now, user demand is for 32-bit systems.

Jon Schmidt, president of third-party developer Transaction Design Inc. in Corte Madera, Calif., and a former Stratus employee, said the VOS user base has been shrinking because of the lack of a growth path. There has been no way to move to "faster, bigger, cheaper hardware," he said. Schmidt said the V Series may attract new VOS users, especially those worried about Windows security.

Stratus officials maintain that migrating to the Intel architecture will be hassle-free, and at least one user agreed. Randall Conway, senior software engineer at Online Resources Corp., a McLean Va.-based provider of banking and payment services that has used Stratus systems since 1986, said Stratus has changed chips before. An earlier move from CISC to RISC required some recompiling, Conway said, "but it was really a minor effort." **47504**

G8 Summit Drives Network Upgrades

LAST WEEK'S G8 SUMMIT on Sea Island, located off the coast of Georgia, prompted the installation of various networking technologies that supported delegations from the eight participating countries, a 20,000-person security force and journalists covering the event.

Much of the new technology will remain in place for use by businesses and consumers. For example, BellSouth Corp. spent $4 million to install a fiber-optic network that spans an 80-mile swath of coastal Georgia. The Atlanta-based company used 2,000 miles of cable in the network, which includes self-healing fiber rings in Sea Island, Savannah and other locations.

To support Global System for Mobile Communications phones, Cingular Wireless spent $2 million to build 20 cell tower sites, including three on Sea Island, 16 in central Savannah and one in Brunswick, said Cliff Minor, vice president and general manager of Cingular's Georgia operations.

Also in the technology mix were 780 push-to-talk cellular phones made by Motorola Inc. The phones were distributed to delegates, security personnel and federal, state and local staffers by the Southern LINC division of Atlanta-based Southern Co. Southern LINC also bolstered its network, which is based on Motorola's iDEN technology, by installing a new cell tower on Sea Island.

Aides to the heads of state who attended could take notes and do research using tablet PCs from Motion Computing Inc., along with Microsoft Corp.'s Office OneNote software and Groove Networks Inc.'s collaboration tools. The tablet devices could communicate with one another over a secure peer-to-peer network, Austin-based Motion Computing said. **47514**

– Bob Brewin

Most of the technology installed for the summit will remain in use

'Showdowns' Predicted as Bar-Code Deadline Nears

BY CAROL SLIWA

Many North American retailers are making preparations to comply with the approaching Jan. 1, 2005, "Sunrise" deadline that requires them to be able to process one digit more than they're accustomed to when scanning bar codes.

But one retail analyst last week predicted that there will also be "a dramatic number of showdowns" during the coming months.

"There is an extremely disturbing trend emerging," said Scott Langdoc, an analyst at AMR Research Inc. He said he has learned that some large grocery, convenience and chain drug stores will be "strong-arming" suppliers to delay shipping products to them with EAN-8 and EAN-13 symbols. Those symbols typically have been used only on products shipped to stores outside North America. In the U.S. and Canada, the 12-digit Universal Product Code (UPC) has been the bar-code standard.

Langdoc said he expects that compliance with the 2005 Sunrise directive will be over 50%. "But we won't be 100% compliant," he said.

Some retailers, such as Wal-Mart Stores Inc., have been compliant for years, since they have been importing products from countries that use the EAN symbology, Langdoc noted. But for others, making sure their point-of-sale scanners are ready for the 2005 Sunrise deadline hasn't been the top priority because of competing projects, he said.

Complying with the directive generally means more than ensuring that point-of-sale scanners can read the EAN symbols. Best Buy Co., for instance, systematically scanned all of its applications for search strings such as "UPC" and "bar code." Wherever it found attributes with a field size of 12 characters, it expanded the field to 14 digits. Like many companies, Best Buy is preparing for the expected increased usage of the 14-digit Global Trade Item Number. **47505**

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ON THE

HOT TECHNOLOGY TRENDS, **NEW PRODUCT NEWS** AND INDUSTRY GOSSIP

Dell Puts Itanium In Four-CPU Server

Dell Inc. began shipping a four-processor server based on Intel Corp.'s 64-bit Itanium 2 chip. The PowerEdge 7250 is just the second Itanium-based system now being offered by Dell, but the company said it sees a growing niche for the 64-bit technology among users who need to get around the 4GB physical memory limitations of 32-bit machines. The 7250 starts at $22,099.

Microsoft Appeals European Ruling

Microsoft Corp. filed an official appeal in the European Union's Court of First Instance in an attempt to overturn a ruling that it violated European laws on competition [QuickLink 45778]. A Microsoft spokesman said the vendor also plans to ask the Luxembourg-based court for a temporary injunction that would stay the antitrust remedies imposed by the European Commission.

Intel Faces New Probe in Europe

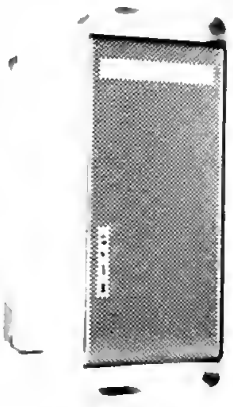
The European Commission has renewed an investigation into Intel's business practices, two years after ruling that a complaint by rival chip maker Advanced Micro Devices Inc. was unfounded. AMD said it recently gave the commission new information about Intel's marketing and licensing policies. An Intel spokesman said the company believes its practices are "fair and lawful."

Short Takes

[illegible] announced a managed service that lets companies use its IP network to distribute Windows-based software to end users and then track use of the products. . . . The [illegible] renewed a contract under which Stamford, Conn.-based [illegible] uses the Web to collect income tax payments for the agency.

Apple Claims That Industry's Fastest . . .

. . . workstation will ship next month when its dual 2.5-GHz G5 processor Power Mac hits the streets. Indeed, the box's specifications are impressive. The $2,999 Power Mac has half a megabyte of L2 cache, handles up to 8GB of RAM and pushes data in and out of the G5s via a 1.25-GHz bus. All that makes for a blazingly fast machine. That's why it uses a closed-loop liquid coolant system to keep your desk from catching fire. Fans don't cut it. But fastest in the industry? IDC's Roger Kay advises that you "take all vendors' performance claims with a grain of salt." Still, he says, speed matters, particularly in markets where Apple is strong, such as publishing and video editing. Can the power-laden Power Mac boost Apple's dwindling market share? Probably not, observes Kay, "but you can say that its share loss can be stabilized."



The new Apple G5 is hot to trot.

Momentum Shifts to Notes . . .

. . . as Exchange cools. That's the view of Steven Birchfield, president of Automation Space LLC in Tucson, Ariz. His company adds workflow tools to both e-mail systems, and he's sensing a shift in IBM's favor. "Lotus Notes will gain a little bit of market share in 2005," Birchfield forecasts. He says that in the past nine months, he hasn't seen one company move from Notes to Exchange, a common phenomenon in recent years. But he has seen a handful move in the other direction. Birchfield recalls that Microsoft Corp. initially wooed top Notes developers and paid them millions of dollars to port their products to Exchange, which he gladly did. But unlike some, Birchfield didn't abandon Notes. That was a wise move, since IBM has apparently adopted Microsoft's approach and is bringing Exchange vendors to the platform. Birchfield's advice to new customers of his TrackerSuite for Lotus Notes and TrackerOffice for Exchange isn't to swap platforms, but to "leverage the skills and experience you already have in-house."

Digital Data Only Tip of Compliance . . .

. . . iceberg. Auditors will want quick access to hard-copy documents, too. That's given a boost to longtime archiving vendor Cuadra Associates Inc. in Los Angeles. Since 1982, the company has been helping automate document management and retrieval. It also means that Cuadra has gone through a number of architectural shifts. And according to Executive Vice President Judy Wanger, the company is in the midst of another change — one not demanded by end users, but by IT departments that want to standardize on browser-based applications. Currently, Cuadra users can access information about a document from a browser, but you need a Windows client for data input. Browsers lack "the rich set of features Windows has," she says. For example, changing language character sets, a snap in Windows, is onerous in a browser. But Cuadra's engineers may have licked the whole problem, and the company hopes to show off the input-capable browser at its fall user conference. An early 2005 ship date is planned.

Cuadra's WANGER says browsers lack "the rich set of features Windows has."

IT Staffers Make Mistakes . . .

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4 in 10 Instances of downtime caused by humans, according to Gartner Inc.

SOA Reaches Beyond Web . . .

. . . services and includes databases. Active Server Pages and other apps not using Web services. So, if you want a true service-oriented architecture for your company, you might take a gander at Looking Glass 5.1, which ships this week from Actional Corp. in Mountain View, Calif. It can locate the source of mixed-service app problems, whether XML-based or not. **47484**

BRIEFS

Dell Puts Itanium In Four-CPU Server

Dell Inc. began shipping a four-processor server based on Intel Corp.'s 64-bit Itanium 2 chip. The PowerEdge 7250 is just the second Itanium-based system now being offered by Dell, but the company said it sees a growing niche for the 64-bit technology among users who need to get around the 4GB physical memory limitations of 32-bit machines. The 7250 starts at $22,099.

Microsoft Appeals European Ruling

Microsoft Corp. filed an official appeal in the European Union's Court of First Instance in an attempt to overturn a ruling that it violated European laws on competition [QuickLink 45778]. A Microsoft spokesman said the vendor also plans to ask the Luxembourg-based court for a temporary injunction that would stay the antitrust remedies imposed by the European Commission.

Intel Faces New Probe in Europe

The European Commission has renewed an investigation into Intel's business practices, two years after ruling that a complaint by rival chip maker Advanced Micro Devices Inc. was unfounded. AMD said it recently gave the commission new information about Intel's marketing and licensing policies. An Intel spokesman said the company believes its practices are "fair and lawful."

Short Takes

MCI INC. announced a managed service that lets companies use its IP network to distribute Windows-based software to and users and then track use of the products. . . . **The INTERNAL REVENUE SERVICE** renewed a contract under which Stamford, Conn.-based **OFFICIAL PAYMENTS CORP.** uses the Web to collect income tax payments for the agency.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY GOSSIP BY MARK HALL

MACWORLD PAUL KNIGHT

Apple Claims That Industry's Fastest . . .

. . . workstation will ship next month when its dual 2.5-GHz G5 processor Power Mac hits the streets. Indeed, the box's specifications are impressive. The $2,999 Power Mac has half a megabyte of L2 cache, handles up to 8GB of RAM and pushes data in and out of the G5s via a 1.25-GHz bus. All that makes for a blazingly fast machine. That's why it uses a closed-loop liquid coolant system to keep your desk from catching fire. Fans don't cut it. But fastest in the industry? IDC's Roger Kay advises that you "take all vendors' performance claims with a grain of salt." Still, he says, speed matters, particularly in markets where Apple is strong, such as publishing and video editing. Can the power-ladeo Power Mac boost Apple's dwindling market share? Probably not, observes Kay, "but you can say that its share loss can be stabilized."

The new Apple G5 is hot to trot.

Momentum Shifts to Notes . . .

. . . as Exchange cools. That's the view of Steven Birchfield, president of Automation Space LLC in Tucson, Ariz. His company adds workflow tools to both e-mail systems, and he's sensing a shift in IBM's favor. "Lotus Notes will gain a little bit of market share in 2005," Birchfield forecasts. He says that in the past nine mooths, he haso't seen one company move from Notes to Exchange, a commoo pbenomenon in recent years. But he has seen a handful move in the other direction. Birchfield recalls that Microsoft Corp. initially wooed top Notes developers and paid them millions of dollars to port their products to Exchange, which he gladly did. But unlike some, Birchfield didn't abandon Notes. That was a wise move, since IBM has appareotly adopted Microsoft's approach and is bringing Exchange vendors to the platform. Birchfield's advice to oew customers of his TrackerSuite for Lotus Notes and TrackerOffice for Exchange isn't to swap platforms, but to "leverage the skills and experience you already have in-house."

Digital Data Only Tip of Compliance . . .

. . . iceberg. Auditors will want quick access to hard-copy documents, too. That's given a boost to longtime archiving veodor Cuadra Associates Inc. in Los Angeles. Since 1982, the company has been helping automate document management and retrieval. It also means that Cuadra has gone through a number of architectural shifts. And according to Executive Vice President Judy Wanger, the company is in the midst of another change — ooe oot demanded by end users, but by IT departments that want to standardize on browser-based applications. Currently, Cuadra users can access information about a document from a browser, but you need a Windows client for data input. Browsers lack "the rich set of features Windows has," she says. For example, changing language character sets, a snap io Windows, is onerous in a browser. But Cuadra's engineers may have licked the whole problem, and the company hopes to show off the input-capable browser at its fall user conference. An early 2005 ship date is planned.

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Cendant Portal to Deliver Security, Business Benefits

Project designed to give 6,500 hotel franchises better access to information

BY JAIKUMAR VIJAYAN

THE HOTEL DIVISION of Cendant Corp. is investing in Web-based identity and access management technology that it expects will yield not just security benefits, but business gains as well.

The New York-based owner of brands such as Ramada and Days Inn is nearing completion of a Web portal project designed to improve corporate information access for its 6,500 hotel franchises. When complete in the fourth quarter of this year, Cendant's Brand Portal site will replace many of the highly manual processes that franchise operators currently use to send and receive information about room rates and bookings, property descriptions, inventory availability and other matters.

"This is leaps and bounds beyond what we have," said Scott Lunsford, senior director of Internet solutinns at Cendant's hotel IT group. Unifying the individually operated franchises under a common portal will deliver significant operational efficiencies and give Cendant brands the scale needed to compete better on price, he said.

"You could say 49% of this is about security and 51% about business [benefit]," Lunsford said.

Model Portal

Cendant's portal is "a great model" to show how companies can get a tangible return on investment from Web access-control and identity management technologies, said Pete Lindstrom, an analyst at Spire Security LLC in Malvern, Pa.

Generally, companies have had a hard time measuring ROI on many security investments. But the cost savings promised by access-control and identity management products are driving growing corporate interest, said Phil Shacter, an analyst at Burton Group in Midvale, Utah.

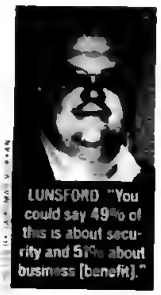
A role-based access-control system using identity management technology from Cupertino, Calif.-based Oblix Inc. is providing the underpinning for the portal, which will be accessed by over 30,000 users.

Cendant declined to say how much it's spending on the project. But according to Oblix, typical costs average about $15 per user for large implementations.

SCHNETTLER says the portal will let franchise owners update rate and inventory data more efficiently.

Oblix's CoreID technology will allow Cendant to build access policies based on factors such as user roles and property size. The technology will also let Cendant automate much of the business processes and rules related to creating, deleting and modifying identity information and access privileges.

The centralized management of user information will allow for better authentication and more secure access to multiple back-end applications, including the rate, inventory management and financial information systems that are needed for Web-based bookings.



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The new infrastructure will eliminate the need to support multiple access mechanisms and secure identity silos, thereby reducing operational costs, Lunsford said. Because Oblix's technology also lets end users perform tasks themselves such as password resets, support and help desks costs are expected to be lower as well, he said.

The franchises will also benefit, said Marcelo Schnettler, manager of Web development at Cendant. The portal will allow franchise operators to update rate and inventory information more efficiently than current fax and mail processes. In addition, operators will no longer need to send separate copies of the information to Global Distribution Systems such as those of Worldspan Technologies Inc. and Pegasus Solutions Inc. that are used by online travel services vendors.

The Web site will also improve Cendant's ability to alert franchise operators of specific rate and inventory optimization opportunities, he said.

Cendant is hoping that the value delivered by the portal will attract other franchises from competing chains, said Lunsford.

Building the portal has had its share of challenges. The biggest has been the process of assigning roles, and consequently the right access levels, to people who access the portal. For instance, a general manager's job at a small hotel is very different from that of a general manager at a large one, Schnettler said. Accommodating those kinds of differences has proved to be the biggest hurdle so far, he said. **47506**

Gartner Sees Growing Need For Wireless Security Policies

BY JAIKUMAR VIJAYAN
WASHINGTON

The escalating use of wireless technology demands formal corporate security policies, according to users and analysts at a Gartner Inc. security conference held here last week.

This includes putting in place dedicated intrusion-detection systems for wireless networks, locking down wireless-enabled systems or installing personal firewalls on them, and keeping all wireless LANs outside the corporate firewall, they added.

Companies need to think beyond simply securing WLAN access points when looking at the security problems created by wireless use, said John Pescatore, an analyst at Stamford, Conn.-based Gartner.

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Instead, the individual client devices inside a WLAN will pose the biggest security risks to corporations for the next several years, he said. Unprotected wireless client devices such as notebooks and handheld devices can be exploited as peers or access points to break into corporate WLANs where they can remain undetected indefinitely, Pescatore cautioned.

So far, there has been little evidence of attacks targeting such devices. But with 85% of laptops and 60% of handhelds expected to be wireless-enabled by 2006, users can expect to see attacks being crafted against such devices in the not-too-distant future, Pescatore said. Yet less than 10% of corporations are likely to have formal wireless security policies, he noted.

Concerns such as this have caused the International Monetary Fund to put its entire WLAN outside the corporate firewall, said Patrick Hinderdael, a division chief at the Washington-based organization. The IMF is using virtual private network technology to authenticate users into its networks, and it's evaluating the option of putting all WLAN traffic in a segregated virtual LAN segment. It also has strong configuration management of its desktops and other client devices, Hinderdael said.

"There definitely is a need for it," said a user at a large Boston-based consumer products company who asked not to be named. The company is crafting a formal policy relating to wireless use in its conference rooms.

"Rogue access points are not the biggest concern," the user said, but the company is setting up intrusion-detection sensors.

The company will also use an extended Transport Layer Security framework to authenticate wireless users and their equipment to the network.

There are other measures that companies can take to secure wireless use, Pescatore said. Regular monitoring for rogue access points remains important. Scoping the threat and knowing where users want WLAN support and turning down power to service only those areas are other measures, he said. **47509**

Security Suggestions

A corporate wireless security policy should mandate that:

- **Networks be regularly monitored** for rogue access points.
- **WLANs be treated as "dirty networks"** and kept outside corporate firewalls.
- **VPNs be used to authenticate WLAN users** into corporate networks.
- **WLAN traffic be put into a segregated virtual LAN.**
- **Host firewalls be installed** on all wireless-enabled clients.

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PHOTOS BY JAIKUMAR VIJAYAN

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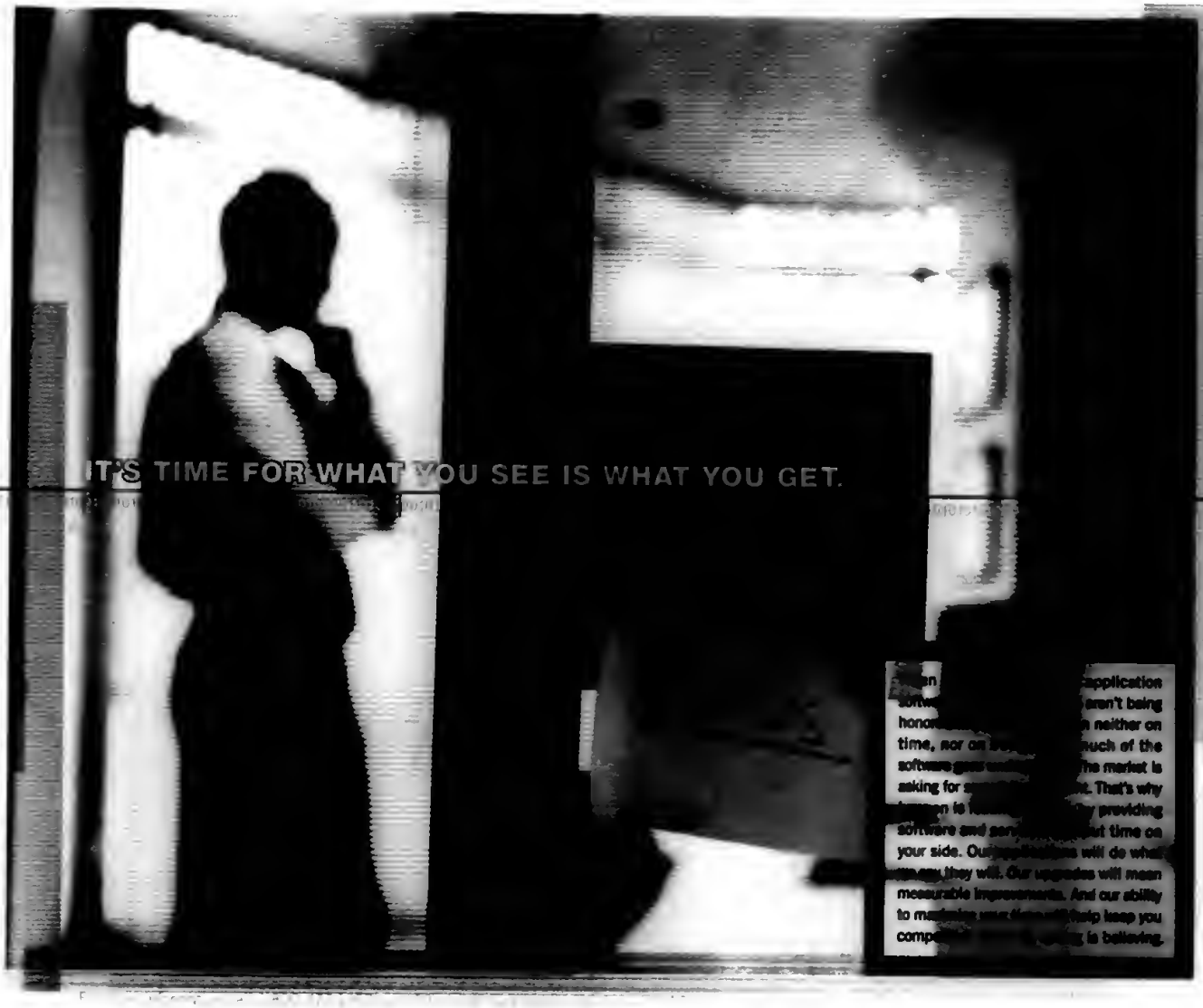

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BRIEFS

Microsoft, SAP Say They Mulled Merger

Microsoft Corp. and SAP AG disclosed that they discussed a possible acquisition of SAP by Microsoft but decided several months ago not to pursue a deal. The companies said Microsoft brought up the idea late last year during joint development talks about Web services. The discussions were made public because of expectations that they would come to light during the trial over a lawsuit the U.S. Department of Justice filed to try to block a takeover of PeopleSoft Inc. by Oracle Corp. That trial began last week.

Microsoft Patches Crystal, Other Flaws

Microsoft released patches for Visual Studio .Net, Outlook 2003 and its CRM applications to plug a security hole in Business Objects SA's Crystal Reports and Crystal Enterprise software. Microsoft, which bundles the Business Objects reporting tools with those three products, gave the vulnerability a "moderate" severity rating. It also patched Windows XP and Windows Server 2003 against a gaming-related flaw.

Symbol Ex-CEO Wanted for Fraud

The U.S. Attorney's Office in New York issued an arrest warrant for Tomo Razmilovic, the former CEO of Symbol Technologies Inc. Razmilovic is believed to have fled the country after fraud charges were filed against him and seven other former executives at Holtsville, N.Y.-based Symbol.

Short Takes

Dallas-based i2 TECHNOLOGIES INC. said it will pay $10 million to settle an accounting investigation by the U.S. SECURITIES AND EXCHANGE COMMISSION. . . . AMERICA ONLINE INC. said it's adding corporate online meeting and voice-conferencing features to its instant messaging service.

HP Adds More Tools to On-demand Product Line

User conference spotlights strategy, but Adaptive Enterprise is still a tough sell

BY MATT HAMBLEN

LOOKING TO buttress its on-demand computiog strategy, Hewlett-Packard Co. this week plans to announce two OpenView management tools at a conference for users of its software products.

HP said one of the new tools can be used to measure the revenue companies lose when network or system components fail, and the other can help IT managers better pinpoint the cause of network problems (see box). Both are due to ship next mooth.

The two products, which will be unveiled tomorrow at the HP Software Forum 2004 conference in Montreal, support the company's on-demand strategy, said Bill Emmett, chief solutions manager for management software at HP. He added that HP officials "absolutely see an upswing in terms of interest" among IT managers in the company's on-demand approach, which is called Adaptive Enterprise.

Io contrast, some HP users said they're still struggling with the complexities of implementing on-demand computing tools and questiooed the immediate need for the technology.

"My major concern with HP software is the stability and expense of the products, so the ideas of Adaptive Enterprise computing don't really apply here at this point," said Greg Barnes, a Chester, Va.-based manager of Unix administration at Media General Inc. Barnes is a user of HP's OpenView Network Node Manager. "The biggest issue I bave is that their NNM software is quite expensive," he said. "On-demand is a nice strategy, but not vital to us."

HP's new OpenView Business Process Insight (BPI) tool for quantifying the cost of oetwork breakdowns also is "kind of pricey," said Thomas Reinsel, CEO of Pepperweed Consulting LLC, an indianapolis-based systems integrator that focuses on projects involving HP software. "So customers will want to know the justification, and that will make it a tough sell."

But Reinsel, who is treasurer of the 8,000-member OpenView Forum International user group in Chicago, added that OpenView BPI should attract plenty of interest from users, despite its price. "We have clients that need to elose their accounting books and draw from 20 differeot applications to be accurate, so that process needs to be visualized, monitored and managed," he said.

In general, HP is cootinuing to develop good products for network management, Reinsel said. However, he noted that the Adaptive Enterprise strategy isn't eotirely clear. "I'm still trying to understand what it means to be adaptive, and I think everybody is," he said. "The overall concept of on-demand is good, but the complexity of it creates problems."

Rich Ptak, an analyst at Ptak, Noel & Associates in Amherst, N.H., said HP has moved beyond the vision stage with on-demand technology and is talking about real products. According to Ptak, HP's new Route Analytics Management System software is basically a oetwork "supersniffer" that examines data packets in an attempt to identify irregularities.

OpenView BPI will compete with Computer Associates International Inc.'s Smart Business Process Views software [QuickLink 47022] and products from IBM's Tivoli Software divisioo and BMC Software Inc., said Audrey Rasmussen, an analyst at Eoterprise Management Associates Inc. in Boulder, Colo.

Rasmussen cautioned, though, that despite the capabilities of tools like OpenView BPI, users still need to define each business process that they want to measure, "and that's usually a difficult thing to do." QuickLink 47516

HP's New Management Tools

OPENVIEW BUSINESS PROCESS INSIGHT

- Correlates the applications and hardware devices tied to business processes and analyzes the revenue loss that system failures could cause
- **Pricing:** Starts at $190,000

ROUTE ANALYTICS MANAGEMENT SYSTEM

- Works with Network Node Manager to examine IP data packets in order to improve the ability of IT managers to identify network faults
- **Pricing:** Starts at $90,000

A MIXED BAG

HP's software group is generating more sales, but profits are elusive – and likely will remain so through next year.

QuickLink 47435
www.computerworld.com

HP Expands ProCurve Switch Line

In a separate announcement, HP will expand its ProCurve line of networking hardware today by adding 32- and 48-port Gigabit Ethernet switches as well as two new modules that can be plugged into existing devices.

Corporate users "are going to be hearing a lot more about ProCurve," said John McHugh, vice president and general manager of HP's ProCurve unit. He added that HP plans to give its switching technology a higher profile, with a focus on supporting security, mobility and convergence to IP networks.

Both of the switches are part of the ProCurve 5300xl family. The 32-port switch starts at $4,999 and supports 28 Gigabit Ethernet connections and four ports for either fiber-optic or copper cable, HP said. The larger model has a base price of $7,499 and offers 42 Gigabit Ethernet connections and six ports for cable.

One of the new switching modules will provide Power-over-Ethernet functionality for the 5300xl devices, at a list price of $2,729. Joe Thielen, IT manager at tea maker Celestial Seasonings, a subsidiary of The Hain Celestial Group Inc. in Boulder, Colo., said he's considering using the new Power-over-Ethernet module to support a voice-over-IP system that's due to be launched next month.

The deployment will serve as many as 2,000 end users, and Thielen said the combination of Power-over-Ethernet capabilities on the HP switches and the company's backup generator should keep the VoIP phones working during a power outage.

Thielen bought three ProCurve 5372 switches last year and said he's adding another one. The price of the first three switches was $30,000, considerably below what it would have cost to buy Cisco Systems Inc. hardware, according to Thielen. In addition, HP offers a lifetime warranty on its switches, he said.

– *Matt Hamblen*

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Coalition Announces Digital Specs to Speed Drug Approvals

New electronic signatures and identity standards to help ensure authenticity

BY TODD R. WEISS

AIMING TO cut the costs of paper-based drug-trial submissions, a biopharmaceutical coalition last week announced new digital signature and identity standards that it said could speed the approval process for new drugs.

The coalition, Secure Access for Everyone (SAFE), was formed last year under the aegis of the Washington-based Pharmaceutical Research and Manufacturers of America (PhRMA), an industry group of 12 major biopharmaceutical companies and their partners.

Gary Secrest, chairman of SAFE, said applications for new drugs don't include standards for digital submissions. That makes it harder for regulatory agencies to deal with mountains of information and ensure authenticity, said Secrest, who is also director of worldwide information security at Johnson & Johnson in New Brunswick, N.J.

"Today, we use a stovepipe kind of trust structure," with each drug company using its own methods to identify itself electronically, Secrest said. The result is a large number of disparate credentialing systems, he said.

The SAFE specifications will eventually be shared with other medical standards groups, including Health Level Seven Inc. in Ann Arbor, Mich., Secrest said. Two members of HL7, who asked not to be identified, said the SAFE standards will no doubt be reviewed by the group.

"It would be a forum that would make a lot of sense," one of the members said. "There would likely be broad interest in this."

Drug regulatory agencies around the world, including the U.S. Food and Drug Administration and the European Medicines Agency, want to accept and use electronic drug-trial and application submissions, he said. But that has been made difficult by a lack of standards.

A major component of the new standards is the use of public-key infrastructure authentication and security technology, which relies on special mathematical formulas, or keys, to encode messages. By using PKI technology, documents sent electronically by participants will be legally enforceable, will comply with rules from drug regulators and can be digitally signed so senders and recipients are trusted, Secrest said.

The standards will first address clinical drug trials and new drug applications, which are costly for pharmaceutical companies because they entail huge amounts of paperwork. But they could eventually be used elsewhere in the industry, Secrest said.

The drug group is following in the footsteps of the banking industry, which created its own trusted electronic authentication system when it established Identrus LLC about five years ago.

"That was a good model" for SAFE and PhRMA, Secrest said. "What the banks had done was put together a good starting point for us in the sense of rules and things to worry about." 47507

SAFEly Aboard

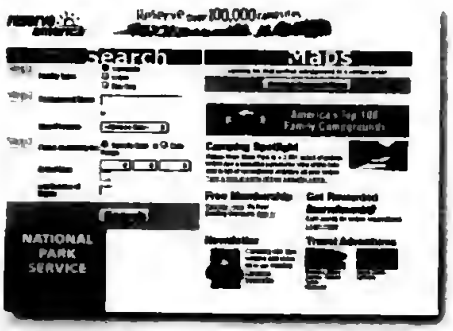
Pharmaceutical companies that are members of SAFE include:

- Abbott Laboratories
- Aventis
- Bristol-Myers Squibb Co.
- GlaxoSmithKline
- Johnson & Johnson
- Eli Lilly and Co.
- Pfizer Inc.

Campground Reservation Service Pushes Online Bookings

As the summer camping season begins in earnest this week, ReserveAmerica Holdings Inc. expects to book more than 60% of its campsite reservations through an online system that's based on a Cisco network and redundant data centers in California and New York.

Two years ago, when the online system first went into use, nearly all the reservations that ReserveAmerica booked for 140,000 campsites in 44 states were made in person or via phone calls to four call centers. But last year, online reservations accounted for more than half of the total bookings, said Frank Yuan, manager of network operations at ReserveAmerica, which is part of InterActive Corp.'s Ticketmaster subsidiary in West Hollywood, Calif.



Yuan said Cisco Systems Inc.'s Catalyst 6500 Series switches are installed at the core of the network that runs the online reservation system. The network supports about 700 end users at ReserveAmerica and 900 computing devices, and typically handles 15,000 reservations per day. ReserveAmerica has spent nearly $1 million in capital expenses on the project, according to Yuan.

Because the reservation system is authorized for use by a dozen federal agencies that run national parks and campgrounds, ReserveAmerica was required to develop backup processing capabilities. Workloads are split between data centers in Rancho Cordova, Calif., and Ballston Spa, N.Y. If IT problems arise at one, all processing is shifted to the other facility.

"Once every couple of months, there will be a failure by the ISP on one coast, so we'll move quickly to the other one," Yuan said. He added that the switches inside each data center also are redundant. 47512

– Matt Hamblen

Hitachi Mixes Fibre Channel, Serial ATA Drives in Arrays

BY LUCAS MEARIAN

Hitachi Data Systems Corp. today will announce plans to mix Fibre Channel and Serial Advanced Technology Attachment (ATA) disk drives in its midrange arrays — a move that puts a different twist on the emerging trend to support different types of drives in a single enclosure.

Over the past 12 months, vendors such as EMC Corp. have said they plan to offer disk arrays that can hold both Serial ATA and Serial SCSI drives. But Hitachi is the first to put disks that use completely different data-transfer protocols in the same cabinet.

John Webster, an analyst at Data Mobility Group LLC in Nasbua, N.H., said the ability to combine Fibre Channel and Serial ATA technology in Hitachi's Thunder 9500V arrays could appeal to users who are looking to install tiered storage infrastructures in order to help reduce their data management costs.

"Users are coming to the realization that it's a good thing . . . to optimize your storage environment for applications that on one hand require very fast access, or on the other hand may really want higher capacity [and] lower cost and can live without the super-high performance," Webster said.

Starting June 22, the Thunder 9500V line will be able to support up to 107TB of mixed storage capacity after users install a microcode upgrade. Scott Genereux, vice president of global marketing and business development at Hitachi Data Systems, said the Santa Clara, Calif.-based company's storage management software will be able to support Serial ATA and Fibre Channel drives from a single screen. 47513

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IT Advances Foster Democratization

BY PATRICK THIBODEAU
WASHINGTON

EVIDENCE that IT fosters democracy can be found in Cape Town, South Africa, where until recently the city's 130-plus legacy systems had split people along racial, class and geographic boundaries.

But at last week's Computerworld Honors awards program here, Cape Town officials explained how a new ERP system "took away all the divisions" and allowed it to "reach each of our citizens as equals," in the words of Andre Stelzner, director of ERP business transformation for the city.

"Some of our citizens weren't reached in the first place, and when they were reached, they had different service levels and different procedures involved," said Stelzner. "It was an unequal form of interaction with the city government and our citizens."

Cape Town's ERP implementation was one of a number of IT projects honored last night that clearly underscored a key goal of the Computerworld Honors program — "The conviction that this technology, more than any other, can allow people to better relate to each other by country and within our great planet and be able to increase our quality of life and standards of living for the benefit of all mankind," said Patrick J. McGovern, chairman of Boston-based International Data Group, Computerworld's parent company.

Another way technology can foster democratization is by means of inexpensive supercomputing, as shown by Srinidhi Varadarajan, director of the Terascale Computing Facility at Virginia Polytechnic Institute and State University in Blacksburg.

Virginia Tech last fall assembled 1,100 dual-processor Power Mac G5 computers into a supercomputer, creating the third-fastest such machine in the world for a relatively inexpensive $5.5 million. Supercomputers can easily cost tens of millions of dollars. "The idea was to generate enough computing power locally at a price we could afford to pay as academia that could solve the computing needs of pretty much the entire campus," said Varadarajan.

Beyond that, Varadarajan said, the broader, societal contribution will be the spread of affordable supercomputing. "Architectures of this sort are starting to be built commercially," he said.

Many of last week's winners were honored for using technology to improve business processes and increase productivity. In total, the finalists in this year's class of winners resulted in 313 new IT case studies presented to more than 120 museums, libraries, research centers and universities around the world.

47485

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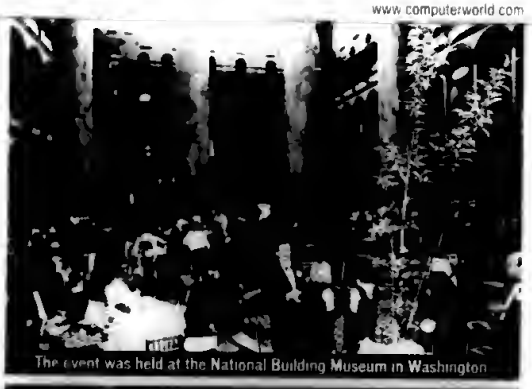
The event was held at the National Building Museum in Washington

of the city of Cape Town (Government and Nonprofit Organizations)

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Computerworld

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VICKI AND DR. JOEL ROBERTSON Robertson Research Institute (Medicine)

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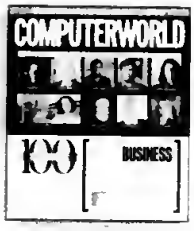

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ROCKET SCIENCE, IT ISN'T. Managerial science, not hardly. No-brainer is more like it. I'm talking about keeping IT people happily, productively engaged in their work, which requires no secret formula or patented process. We rediscover this every year in our Best Places to Work in IT survey (see page 21 and QuickLink 43610), which identifies the most-desired benefits as these perennial favorites: access to cutting-edge technology, training opportunities that help advance careers and flexibility to provide some balance between work and personal life.

MARYFRAN JOHNSON is editor in chief of *Computerworld*. You can contact her at maryfran_johnson@computerworld.com.

In our survey of nearly 17,000 IT professionals — a record-breaking number for us — we harvested a great crop of 100 companies with enviable benefits, enlightened attitudes about management and empowered employees who feel truly valued. All 100 of these companies are planning IT salary increases this year, and half of them are also bumping up training budgets. There are even a few organizations offering extraordinary workplace perks such as concierge services, take-home meals, hair salons and lap pools.

For example, if I thought I could take the Minneapolis winters, I might be firing off a résumé right now to General Mills (No. 19 on our list), where a new three-story employee-services building houses enough amenities to put your average shopping mall to shame. Another place I could see on my personal short list would be No. 33: Principal Financial Group. The lure there would be the policy of "No Meeting Fridays," which smartly recognizes that the last thing anybody wants before the weekend is another time-sucking black hole of a meeting.

Principal Financial also makes good use of an IT governance approach that spells out well-defined enterprise business plans and identifies the high-priority projects. "IT employees don't feel overwhelmed," says Matt Frantzen, assistant director of IT architecture there. "If the work is never-ending, you never have the sense of accomplishment of a job well done."

Yet even at these 100 exemplary companies — where the grass sure has that emerald gleam — there is something else you'll all recognize: a dark undertow of job anxiety, shaky morale and overall worry about the direction of the IT profession.

When our Features editor, Mitch Betts, read through some of the verbatim comments in the employee surveys, he was stunned by the discontent at even these great places to work. The culprits, he noted, are "fear of outsourcing and overwork because of previous layoffs," an unfortunately universal phenomenon in IT. Only 62% of our survey respondents said they felt their jobs were secure, and 37% described their workplace as "very stressful" or "stressful."

When we compared our 2004 Best Places survey results with 2003's, a few other sobering indicators surfaced. Layoffs were up at Best Places companies, with 46% of them having let people go in the past year, compared with 28% in 2003. There is also less of a feeling out there that management even recognizes "achievements and good work."

"When you're dealing with a down economy, you have to focus on the basics," observes Paul Glen, author of *Leading Geeks* (Jossey-Bass, 2002) and a *Computerworld* columnist. "Cool work, great relationships, fair pay and a reasonable belief that the future holds more of the same."

So there's a call to action for every IT manager. Check out the morale-boosting ideas and practices in action at our Best Places companies. Make sure you're recognizing the hard work going on in your own shop. And get that conversation going about what's keeping your people up at night.

No rocket science required. Just compassion and connection. 47477

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SAY IT A BIT LOUDER.
Bien Venues eh?

We're Ready For What Comes Next

WE ARE emerging from the three lean years that followed the five crazy years. It was a wild ride, and I think we are actually better off for it.

In the past eight years, we have grown a lot wiser as professionals. First, we learned that IT is a powerful stimulus and an enabler of growth. Then we learned that technology by itself doesn't produce value. Value, it turns out, is actually produced by aligning technology with business and managing IT operations as if they were a business — which they are.

Let's think about what we've learned. Ten years ago, re-engineering and client/server technology showed everyone how powerful IT could be. Then the Internet kicked in. That started the crazy years. We all participated in a collective euphoria. Big iron was dead, e-commerce was the future, and we rushed to get on board before the world passed us by. Companies with cool products and intimidating names sprang up to sell systems and services that promised to transform the way business was done.

MICHAEL H. HUGOS is CIO at Network Services Co., a distribution cooperative in Mount Prospect, Ill., that sells food-service and janitorial supplies. He is the author of *Essentials of Supply Chain Management* (John Wiley & Sons Inc., 2003). He can be reached at mhugos@nsconline.com.

Those were heady days, but I remember feeling that they were a bit goofy, too. Much of the activity consisted of people building Web sites where other people could buy stuff. I wondered if I was missing something.

Then the economy slowed, and in the space of six months, the crazy years ended and the lean years began. The lean years were a classic example of being blamed for mistakes that weren't entirely our fault. People started pointing fingers at IT and saying it was because of us that they lost so much money. Well, yes, we were involved, but as I

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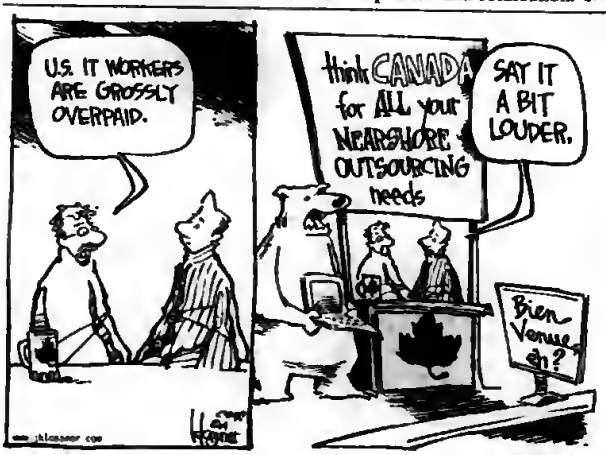
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Cisco Systems and Intel are proud to sponsor Computerworld's 2004 Best Practices in Mobile & Wireless Awards Program and this special supplement profiling the winning case study submissions. The winners have distinguished themselves as innovators, and we believe that by sharing their stories with other IT managers, they will inspire other impressive solutions.

May we acknowledge and thank the companies, public relations firms, agencies, other organizations and individuals who took the time to respond to the nomination submission process.

We both had the occasion to participate in the awards ceremony for this prestigious program at the May Mobile & Wireless World conference, held in Palm Desert, Calif. There we saw first-hand the tremendous enthusiasm for this initiative, and the well-deserved pride of the winners being recognized as leading practitioners in the industry.

Many hard-working judges had the arduous task of selecting winners and honorable mention designates in the five categories. Cisco Systems, Intel and Computerworld appreciate those judges' dedication to this ongoing program.

We trust that the profiles of the 10 winners in this supplement will help you meet the challenges that you face in your own enterprise or organization, it is our hope that these examples will bring you increased productivity and profitability from your deployment of mobile and wireless technology.

Once again, we offer our most sincere congratulations to the winners of this year's contest, and best wishes for every success to you and all readers of this special supplement in your IT solution endeavors.

ANN SUN,
SENIOR MANAGER OF MOBILITY AND WIRELESS
CISCO SYSTEMS, INC.

MARTY MENARD,
DIRECTOR, INFORMATION TECHNOLOGY
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Judging criteria and other program information are available online at www.[illegible].com

Cedars-Sinai Medical Center

FAST FACTS

Cedars-Sinai Medical Center
Los Angeles, Calif.

www.csmc.edu

"Physician acceptance and satisfaction with the wireless network has been tremendous."

RAY DUNCAN, DIRECTOR, TECHNOLOGY AND ARCHITECTURE ENTERPRISE INFORMATION SYSTEMS, CEDARS-SINAI MEDICAL CENTER

CEDARS-SINAI MEDICAL CENTER

Few industries have a bigger reputation for paperwork and slow technology systems than does healthcare — and few could benefit more directly from smart technology applications. After all, when it comes to healing, the more responsive a medical team can be, the better care they can give.

At Cedars-Sinai Medical Center, the Los Angeles enterprise with nearly 10,000 employees, senior management foresaw the value of technology, in particular that of wireless and Web technology.

RAY DUNCAN

Challenge

In 2001, the IT department at Cedars-Sinai was mandated by senior management to deploy pervasive wireless network access throughout all patient-care areas. Management was so intent on leveraging wireless that the project was prioritized highest of all IT investments that year.

Solution

The deployment of the wireless network, combined with development of a Web-based application for clinicians, is called Web/VS (for Web Viewing System). The system provides an integrated, real-time view of results and reports from more than 20 different clinical systems and databases under a single navigation, security and logging umbrella. Access to the network is authenticated and encrypted.

Subsequently, wireless access has become standard at the facility. Today, roving workstations are used in all Intensive Care Units, and in other Cedars-Sinai areas as well.

The Web/VS system has 8,000 active users, primarily physicians and nurses, and gets more than 10,000 logins per day. Ray Duncan, director of technology and architecture at Cedars-Sinai, says users love the network. "Physician acceptance and satisfaction with the wireless network have been tremendous," he says, "and many physicians carry their own notebook computers on rounds for convenience."

Cedars-Sinai has also invested heavily in online references and knowledge bases that can now be accessed via the Web from any PC or wireless device on or off campus. "The campus wireless network, together with the widespread use of laptops and handheld devices, allows us to bring clinical information right to the bedside and reduces the need for cabled machines," says Duncan. It also cuts down on contention for the extremely limited desk and counter space in a busy and crowded healthcare environment.

In parallel, several pilot projects with handheld devices have exposed the synergistic effects of Web user interfaces, handheld devices and wireless networking. The IT department is now ramping up to support access to a broad variety of clinical data on the current generation of wireless handhelds with built-in 802.11b support, color displays and Javascript.

Cedars-Sinai's project has already become an integral part of the medical center. "We're building a patient care tower that will open in 2005, and it will have pervasive wireless networking the day it opens," says Duncan.

This award recognizes enterprises that overcame early adoption obstacles and resolved problems [illegible] house or with partners. WLAN deployments, security and manageability were all assessed in this category.

Continental Airlines

FAST FACTS

Continental Airlines
Houston, Texas

www.continental.com

"No longer is wireless technology risky; instead, it's a viable technology option to support our business needs."

DOUG STEWART, ENTERPRISE PROGRAM MANAGER, CONTINENTAL AIRLINES TECHNOLOGY

Continental Airlines

To succeed in business today, companies need the agility to turn on a dime, to answer any opportunity that arises. In many cases, technology can be the competitive tool that provides that nimble response.

Challenge

Take the case of Continental Airlines' mail tracking system. The company, which has 48,000 employees, wanted to bid on a US Postal Service contract. Regulations required commercial air carriers handling mail to collect data at three points. Scans were to be performed at the point of tender; during plane-side loading; and at completion of transit. Data from the scans would then be reported to the USPS and presented for payment. The contract was a revenue opportunity for Continental potentially worth millions of dollars.

DOUG STEWART (LEFT) AND JON FAUNER-SHANTZ OF CONTINENTAL'S WIRELESS TEAM

Solution

To address the challenge, a Continental Airlines Technology team led by Enterprise Program Manager Doug Stewart developed a mail tracking system that extended the existing company network in Continental's hub airports and leveraged cellular General Packet Radio Services (GPRS) in 93 other locations. The solution consisted of over 500 handheld scanners running internally developed applications to collect and scan data and deliver it to Continental.

According to Stewart, "The solution called for ground-up engineering and software development in an extremely short time frame, as the project had a start-to-finish timetable of approximately four months." Project teams needed to evaluate wireless solutions that allowed for the deployment of a robust scanning methodology while meeting the compressed delivery schedule. As the network and handheld teams wrestled with connectivity issues, the development team pursued an application architecture that accounted for multiple operational processes.

Other factors driving project requirements were device manageability, streamlined support mechanisms and the ability to secure the scanned data and ensure its integrity as it entered the system for payment. Manageability was addressed through the ability to deliver software updates over both networks.

The update process gives the developers a tool with which they can continually improve the product, enhancing the process. Twenty-four-hour support provides Continental's cargo operation with immediate problem-resolution paths. This ensures that the airline does not absorb delays due to scanning and loading of the mail, and also maximizes the revenue potential for each flight. Moreover, Continental addressed data security and integrity throughout the system.

With such ambitious goals, it's impressive that the project was completed ahead of schedule — allowing Continental extra time to learn the new application and technology before putting them in production. The reliability of the solution and the ability to centrally report both scanned data and performance have resulted in a significant increase in Continental's market share.

Fidelity Investments

FAST FACTS

Fidelity Investments
Boston, Mass.

www.fidelity.com

"The type of customer attracted to this is an active, affluent person who sees the value of having information available on a regular basis."

JOSEPH FERRA, CHIEF WIRELESS OFFICER, FIDELITY INVESTMENTS

Fidelity

In the financial services industry, the saying "time is money" has a slightly different ring — for people like traders and brokers, it's the literal truth. Every second that goes by before a trade can make the difference whether the trader sells at a profit or a loss.

Challenge

With such pressure to be nimble in response, small wonder that Fidelity Investments has long been a pioneer in the wireless technology field. It's had a wireless application since 1998, when it launched an early wireless project called Instant Broker. "It was the very early stages of wireless, and we were really pushing the envelope," says Joseph Ferra, chief wireless officer at Fidelity.

JOSEPH FERRA

Solution

Since then, the application has evolved into Fidelity Anywhere, which is available across all national wireless carriers. To promote easier access to customers and prospective investors, Fidelity has aligned with five of the nation's largest carriers to secure premier positioning within their wireless Internet portal. Today, within the "finance" category, consumers can quickly find Fidelity-sponsored content. Fidelity was the first financial services provider to offer financial information to non-customers, such as quotes, watch lists and market news.

Fidelity is now focused on providing personalized content such as a consolidated portfolio snapshot, which is resulting in more engaged investors. Special attention has been devoted to building alert services to allow investors to receive pre-selected information, such as IPO announcements, as soon as the event happens.

Fidelity Anywhere now has 14 applications, ranging from retail brokerages to retirement, 401(k) and insurance applications. The latest enhancements include downloadable "over-the-air" applications for wireless devices. This feature provides one-click access to Fidelity supporting research that shows a direct correlation between an application's prominence and its usage.

Wireless has become an opportunity for Fidelity to grow its relationship with customers beyond brokerage services; other product offerings have been added to the wireless offering, including NetBenefits retirement services. The Fidelity Anywhere user base continues to grow, currently exceeding 250,000 subscribers. Growth in prospects is nearly four times higher, as evidenced by the 4-million-plus quote requests Fidelity serves up each month.

"This has paid off in a big way," says Ferra. "The type of customer attracted to this is an active, affluent person who sees the value of having information available on a regular basis."

In fact, Ferra thinks that wireless capability will eventually become just one more communications channel. "There's a great presentation by the CEO of Sprint where he talks about the emergence of a 'third screen' in a person's lifestyle," he says. "On top of the PC and the TV, we're beginning to see people using the cell phone to do things like access weather information. That will become even more common as more capabilities become available."

This award goes to businesses that aggressively expanded mobile computing into traditional office environments in which LANs and desktop systems were the status quo. Implementations must lead to significant business advantage and productivity gains

UNICCO Services Co.

FAST FACTS

UNICCO Services Co.
Newton, Mass.

www.unicco.com

"If we can make technology a differentiator, it helps us win more jobs."

JEFF PETERSON, CIO, UNICCO

UNICCO

UNICCO Services Co. is one of North America's largest facilities management companies, with over $650 million in annual sales, 1,000 customers and 20,000 employees. With more than 50 years of experience, UNICCO offers facilities services that range from maintenance, engineering and cleaning to production support, lighting and administrative/office services.

In a low-margin business such as facilities management, maintaining competitive advantage is crucial. For UNICCO, with an industry-leading 95% customer retention rate, improving service quality and further eliminating customer churn makes the difference.

Challenge

UNICCO wanted to use technology to help its field site inspectors benchmark service quality, and turned to mobile technology for the solution. "Our work force is remote, so they needed a user-friendly tool that's easy to use in a remote environment," says Jeff Peterson, CIO at UNICCO. Moreover, Peterson saw the value of tying the tool into his existing portal infrastructure, to allow customers access to the information.

Solution

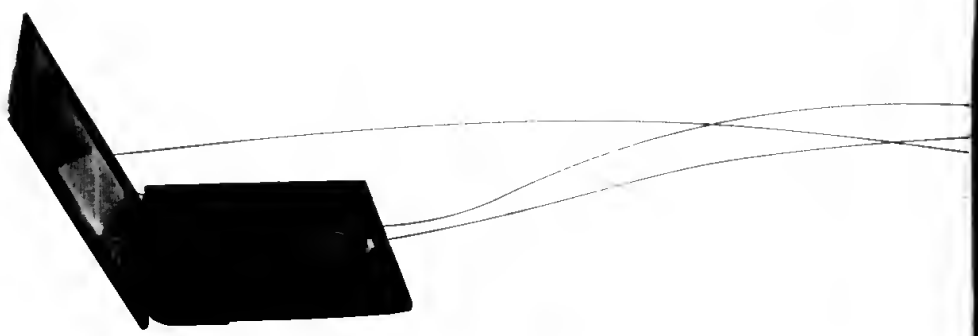
Peterson and his staff worked with an outside integrator to design and implement a multi-channel inspection solution. The mobile, handheld component is based on a "sync and go" strategy. This means that each day, UNICCO's 300 site inspectors use a handheld PC with multi-lingual capabilities to audit completed work. For example, when an inspector scores the services at Boston's Hancock Tower, the device is pre-customized however that customer wants it. This helps the inspectors focus on the items of interest to each client

When inspectors return to the office, a download is automatically triggered. The information gathered in the field is then synchronized with a Web-based management system for reporting. The Web-based component leverages the company's existing myUNICCO.com customer portal — giving customers a near-real-time view of the status of their properties. "The customer can log onto their portal and see the results for one or multiple locations," says Peterson.

For UNICCO, the solution brings insight into the quality of the service its employees perform by providing, for the first time, consistent scoring and benchmarking across its customer base. With central administration, the company now has the ability to conduct site-level analysis by team, inspector or area type in order to quickly identify potential problems, and take immediate action. Moreover, with improved quality and response times, customer satisfaction has increased significantly, with customer turnover being reduced even further.

"Rolling these handheld solutions into the existing investment with myUNICCO.com really bundled together a lot of pieces for us," says Peterson. "We saw this as a critical tool to leverage as part of our services."

JEFF PETERSON, UNICCO'S CIO AND VP INFORMATION TECHNOLOGY (RIGHT), POSES WITH OTHER TEAM MEMBERS.



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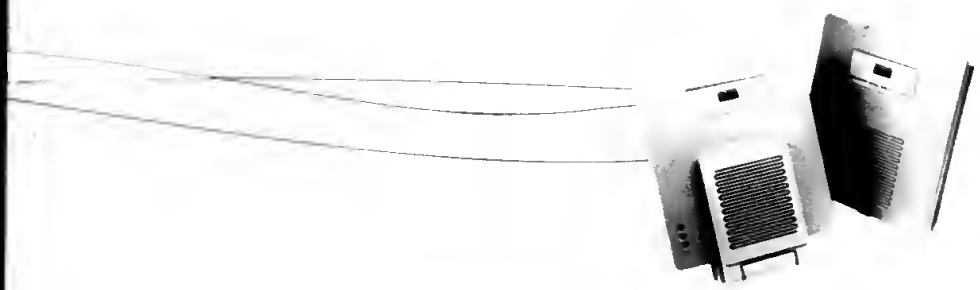

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CSX Transportation

FAST FACTS

CSX Transportation
Jacksonville, Fla.

www.CSX.com

"We were able to eliminate manual processes and improve data quality and accuracy."

JOHN WEST, VICE PRESIDENT OF APPLICATIONS DEVELOPMENT, CSX

Railroads may evoke old-fashioned images of smokestacks and waving conductors, but many of today's railway companies are more about long-haul freight hauling and transportation, a complex process that needs more than a coal boiler. It needs technology.

For CSX Transportation, the largest rail network in the eastern U.S. — the company has over 20,000 employees — wireless technology has helped clear up a tangled thicket of manual paper-based processes that formerly governed the way it delivered and tracked freight.

CSX TEAM MEMBERS DONNA CRUTCHFIELD, STEVE COBB, MONICA MOORE AND CONNOR SHEPPARD

Challenge

"We had some significant holes in the delivery of instructions to the crews, as well as the timeliness and accuracy of the data in our work order systems," says John West, vice president of applications development at the Jacksonville, Fla.-based company.

The trouble was that crews couldn't record their deliveries in real-time. West gives an example: A crew going out on a freight delivery trip would pick up paperwork at the beginning of the day that told them where to deliver the contents of 25 to 40 cars. The entire run would typically take 10 to 12 hours. Once the crew returned, "They'd have to finish the paperwork and fax it to our customer operations center," says West. "They, in turn, would input that data into the systems and update the information on what cars had been delivered that day. If there were instructions to pick up cars, they'd update that, too."

Once you factor in the inevitable paper pile-up as faxes waited to be input, along with transcription errors, the result is a system that needed a serious overhaul.

Solution

Working in tandem with the train conductors, West's team came up with the Wireless Work Order System, which operates on a handheld device with a touch-screen solution. Train conductors now start the day by downloading their work order to their wireless device. The device is typically docked in a ruggedized docking station, enabled with Ethernet. The conductor removes the device from the docking station, and the device switches seamlessly from Ethernet to a wireless 1xRTT or GPRS network. All information is encrypted and compressed.

On the job, conductors can now report their work nearly in real-time if they have cellular coverage. If they don't, they can still report their work, it is stored until the device gains cellular coverage or is docked.

At the end of their shift, conductors simply replace the unit in the docking station to recharge the battery. Once docked, the device is enabled to receive remote software distributions. "We were able to eliminate a significant amount of manual processes, as well as improving the data quality and accuracy," says West.

The Wireless Work Order System has been distributed to 650 trains, with a target of almost 1,000.

CSX CORPORATION

This award recognizes organizations whose wireless solutions have fundamentally changed the way they do business. Judging crite ria included greater accuracy and improved customer responsiveness

Honeywell ACS Service

FAST FACTS

Honeywell ACS Service
Golden Valley, Minn.

www.acs.honeywell.com

"We've reduced paperwork from the field by 93%, reduced the billing cycle and virtually eliminated phone traffic between dispatchers and technicians."

PAUL DANIELSON, SERVICES PROCESS AND TECHNOLOGY LEADER, HONEYWELL ACS

Honeywell

Honeywell ACS Service is a $2 billion division of Honeywell International. Headquartered near Minneapolis, the division's 20,000-plus employees provide products and services that include building automation systems, industrial automation solutions; security and life safety systems, energy management, and heating, ventilation and air-conditioning (HVAC) system maintenance.

Challenge

The company recently decided it was time to streamline the work process of field service technicians who repair and maintain HVAC systems, and opted to turn to wireless technology for the solution. According to Paul Danielson, services process and technology leader at Honeywell ACS, the old, paper-based process was rife with inefficiencies. "We have 1,400 technicians across North America, and they average about two service calls a day, each of which required a service work order," Danielson says. "That came out to approximately 20,000 pieces of paper generated weekly."

PAUL DANIELSON

On top of that, once completed, the work orders had to be input painstakingly into two separate systems — financial and service management — and if reports were needed by customer service, that group had to spend more time generating reports. "It was very labor-intensive and slowed things down," says Danielson.

Solution

In response, Danielson and his team came up with a solution known as FAST (Field Automation Service Technology). FAST uses self-synchronizing wireless and satellite communications enabled by mobile software and mobile computers. It is closely integrated with Honeywell's back-end systems for seamless operation.

Field technicians now receive work orders electronically on their mobile computers, eliminating a series of phone calls between technician and dispatcher. "In areas of reduced coverage, the system will automatically page the technician's cell phone or pager with a text message, so we have a backup for communication as well," says Danielson. "Once they receive a work order, they accept it or not, and the dispatcher knows it was received."

Once technicians are on the work site, the application guides them through the job — prompting them to perform maintenance tasks, take notes and record recommended repairs. The wireless data communication keeps them in real-time contact with each other and the office.

When service is complete, the customer approves the work by signing the technician's screen. The completed work order is automatically sent to the office for processing and billing. "It updates the database for the work history of this device, and if the customer wants, we can email a copy of that work order directly to them," says Danielson.

The benefits of FAST have been numerous. The billing cycle is down to five days, while field service productivity has increased 3,000 hours a week. Best of all, that paperwork avalanche has disappeared.

OrthoRehab Inc.

FAST FACTS

OrthoRehab Inc.
Tempe, Ariz.

www.orthorehab.com

"The solution is a no-brainer as far as how quickly we're going to pick up our investment."

BRIAN TOWER, DIRECTOR OF IT, ORTHOREHAB

ORTHOREHAB
passionate about motion

OrthoRehab Inc. is a leading supplier of rehabilitative goods and services to post-operative limb surgery patients. The company, which employs nearly 500, offers products built around an advanced technology called Continuous Passive Motion (CPM) that allows postoperative patients to exercise limbs and joints with minimal associated stress, thereby speeding healing.

Service representatives deliver the CPM units to patients' homes, hospitals and clinics, and instruct patients in their use. Inventory is frequently transferred from one location to another, with almost 17,000 pieces of equipment in the field at any given time.

BRIAN TOWER

Challenge

While the CPM technology is advanced, the way the company used to track inventory was not. OrthoRehab's paper-based tracking system required service reps to manually fill out a form every time a unit was transferred and fax it to another location, where an administrator would enter the information into a database and forward it to the billing department.

Inevitably, the time lag caused by data entry resulted in confusion and delay. "We might call up a regional office and say, 'You have 20 pieces of equipment,' and they'd say they had two," says Brian Tower, director of IT at OrthoRehab. "Our paperwork typically lagged behind our service and support by two weeks to a month."

Moreover, if a device was delivered to a hospital patient and the patient took it home, the transfer might never get recorded. Other common problems included faxes not transmitting and inaccurate or illegible forms. Everything delayed the billing process, which was what OrthoRehab was actually relying on to track inventory movement. On top of it all, every time a physical inventory was performed, 2,000 to 3,000 devices were "missing."

Tower realized this process was costing OrthoRehab too much time and money and that a new process was needed — one that worked wirelessly, preferably in real-time, and independently of the billing system.

Solution

Tower's team worked to come up with a complete wireless inventory-tracking solution. Now, each service rep is equipped with a laser scanner tethered to a handheld device. They can then scan CPM units right at the patient site. Using the handhelds, the reps fill out preformatted forms and transmit them directly to headquarters, where the information is automatically entered into the billing system.

Now, equipment is always correctly linked to the corresponding patient, and service reps have cut down on paperwork. "Before, we pretty much lived and died by cell phones and pagers," Tower says.

The solution is quickly paying for itself in inventory loss reduction, with annual savings of approximately $250,000. "Compared to what we were losing," Tower says, "it's a no-brainer as far as how quickly we're going to pick up our investment. The solution was both a necessity and an investment well worth making."

This award is earned by small to mid size [illegible] in worldwide emerging markets [illegible] solutions to gain competitive advantage.

Shared P.E.T. Imaging LLC

FAST FACTS

Shared P.E.T. Imaging LLC
Canton, Ohio

www.sharedpet.com

"Making this application available wirelessly is genuinely improving patient care."

MARC SIMMS, DIRECTOR OF INFORMATION TECHNOLOGY, SHARED P.E.T. IMAGING

PET, or Positron Emission Tomography, is a non-invasive medical procedure that can yield information on body metabolism not available from other procedures, such as X-rays or MRI scans. PET, often used for cancer diagnoses but with other applications as well, is immensely valuable because it can often spot diseases in their earliest stages.

Challenge

Canton, Ohio-based Shared P.E.T. Imaging, a company with approximately 100 employees, had already developed software, called ClarityPET, that medical personnel use to "read" PET scans. Until recently, these reads could be performed only at a fixed workstation, which was typically crammed in a nuclear-medicine reading room in a busy hospital.

Solution

Now, though, Shared P.E.T. Imaging has pushed this technology into the mobile realm. Through a Wi-Fi connection, PET scans are now sent from the workstation to such mobile devices as Tablet PCs. (While the scans can be downloaded directly to portable devices, most of the 35 users currently up and running capture the image on the workstation, and transmit it wirelessly from there.)

It's easy to grasp the importance of this breakthrough when you consider how busy physicians are today. Previously, doctors had to wait their turn at a single viewing station, wasting valuable time. Now, they can pick up their studies anywhere and complete their diagnostic evaluation from anywhere in the hospital, their office or elsewhere.

The improved workflow allows them to interpret results more quickly — and this means better patient care. "We see a lot of physicians conducting ad-hoc meetings with each other in hospital corridors," says Marc Simms, director of IT at Shared P.E.T. Imaging.

Mobile reading of PET scans improves care in other ways as well. For one thing, without a queue of their peers behind them in a busy hospital, doctors now take more time reading the scans. And when it's time to discuss results with patients, the meeting can take place in a private office. This is a much more serene, supportive environment for patients, who are likely to be anxious and frightened.

Morenver, the Tablet PC-enhanced ClarityPET allows physicians ro present full PET results to their hospitals' Tumor Boards. These boards are weekly peer reviews of all cases handled in a hospital. Presenting the scans to such a board reduces the risk that a result will be misinterpreted. "This was one of the biggest needs our users were telling us about," Simms says. Before, the format used to view PET scans on overhead projectors rendered the resulrs fuzzy and difficult to read.

Bringing ClarityPET to the wireless realm has been a big win for physicians, hospitals and, most importantly, patients.

MARC SIMMS

Allstate Insurance Co.

FAST FACTS

Allstate Insurance Co.
Northbrook, Ill.

www.allstate.com

"By leveraging both awareness of our business partners' needs and technology, we are prepared to acquire, provision and support wireless solutions to meet today's requirements as well as business objectives of the future."

JOHN BADER, VICE PRESIDENT, ALLSTATE ENTERPRISE TECHNOLOGY

Allstate.
You're in good hands.

With the rapid growth of mobile devices and wireless technology, forward-thinking businesses have vowed to seize control immediately — before devices spring up like mushrooms, with users demanding support and resources. Northbrook, Ill.-based Allstate Insurance Co., which has over 35,000 employees, is an exemplar of this proactive strategy.

Challenge

When the PC revolution hit in the 1980s, enterprises were slow to take notice — and many have paid the price, in the form of unauthorized software applications and a general lack of centralized IT control.

JOHN BADER

For the past two years, Allstate has been setting standards and developing enterprise-wide integration processes for the acquisition, provisioning and support of mobile technology. Allstate has focused on standards for personal digital assistants (PDAs), Wi-Fi and wireless cellular network connections.

Solution

Early on, Allstate made the decision not to create wireless-only processes or support teams. The company determined that such a strategy might fence off wireless technology from the mainstream IT organization. Instead, Allstate determined which existing job functions and work processes most closely aligned with the new technology, and merged the two.

Acquisition of mobile and wireless equipment is performed in concert with existing architectural resources and standards committees to ensure alignment with existing systems. The company's procurement group has been engaged to ensure a process that leverages the company's size to get the most attractive pricing possible.

Provisioning has been developed with central control points to ensure that the right technology is being obtained and that proper approvals are sought. This control also allows for the central gathering and tracking of asset information, so costs can be allocated and billed to the proper requesting departments.

While Allstate has yet to fully convert employees to a WLAN-only model, reliance on the wireless network is growing rapidly. The company has adopted standards for wireless PDAs and WWANs as well as centralized systems management. Today, the company supports 400 wireless PDAs, over 1,000 Wi-Fi users and about 2,000 WWAN users.

Due to Allstate's thoughtful approach to its wireless strategy, many financial benefits will take time to develop; the company's philosophy was to build a lasting infrastructure that will pay dividends for decades. For example, mobile and wireless support has been integrated into existing help desk services, which entailed additional training and new documentation for help desk staff.

This step hasn't been free of cost, since manpower and equipment have been deployed to support resources, the company says. But it's less expensive in the long run than creating redundant support teams that specialize in wireless support.

Positioning itself wisely will pay off for decades at Allstate.

This award recognizes enterprises whose innovative, thought-provoking wireless solutions deliver practical business ... In addition to innovation, entrants were judged on their vision for the future.

NYK Logistics Inc.

FAST FACTS

NYK Logistics Inc.
Carson, Calif.

www.nyklogistics.com

"RFID technology is the wave of the future; we're positioned to capitalize on it."

RICK POPLE, VICE PRESIDENT OF OPERATIONS, NYK LOGISTICS

NYK LOGISTICS
& MEGACARRIER

NYK Logistics Inc. operates a 70-acre loading facility in Long Beach, Calif., that features more than 1,200 parking slots and 250 loading-dock doors. Each year, the facility manages more than 50,000 inbound ocean freight containers and 30,000 outbound trailers.

NYK Logistics has over 20,000 employees worldwide. One key client is retail giant Target Stores; the logistics company coordinates on-time shipments to 22 different Target distribution centers across the U.S. This makes for a dynamic, complex "yard." The Long Beach facility operates 24/7 and processes more than 1,000 gate transactions each day, checking in and out containers from 11 different steamship lines and up to 15 domestic carriers.

Challenge

Historically, NYK Logistics relied on a home-grown yard management system, coupled with extensive manual labor. Armed with clipboards, pads of paper and walkie-talkies, employees constantly roamed the yard, manually entering data and scanning bar codes on containers in an effort to keep up with the current inventory.

Solution

NYK Logistics concluded two years ago that it must modernize its yard-management process. Target's volume was increasing, and the logistics company had maxed out its facility. In late 2002, NYK Logistics began to investigate wireless technology solutions. Moving rapidly, the company selected a WLAN-based real-time locating system (that is, active RFID) and a yard-management software application to transform its operations in early 2003.

Today, upon arrival at the gate, every container or trailer is tagged with a tiny, active radio transmitter. From that point on, NYK Logistics personnel are constantly connected to yard assets no matter where they are.

The system was deployed in less than 75 days and paid for itself in less than nine months, according to Rick Pople, NYK Logistics' vice president of operations. It provides "100% accurate location information for every container and trailer" within the Long Beach facility. No longer equipped with pads and clipboards, yard workers use handheld devices and ruggedized Tablet PCs to transmit data via the WLAN.

NYK Logistics' yard management is now the envy of the industry. At its center sits a completely wireless command-and-control center that automates time-sensitive movements of containers, ensures that loading docks are used as efficiently as possible and provides unprecedented turnaround times. One example, during its fall 2003 peak season, NYK Logistics conducted more than 1,800 gate transactions in one 24-hour period — a facility record. During that peak season, daily throughput rose an average of 38%.

Small wonder the company was named Deconsolidator of the Year by Target.

NYK'S RICK POPLE, VICE PRESIDENT OF OPERATIONS, AND CHARLES KERR, EQUIPMENT CONTROL MANAGER

Key words for your company:

mobility, mobility, mobility.

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High performance. Power to run the most demanding applications

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recall, CEOs and CFOs and boards of directors and investors, all of whom wanted more and more, were urging us on every day. Nonetheless, in the past few years, we have faced our problems, cut costs, improved efficiencies, gotten a grip oo expenses and learned to get things done faster without spending so much money.

It is this experience that makes us ready for what comes next. A lot of new technology is about to burst forth. But we won't be so easily dazzled this time. As we listen to preseotations or read articles about some great new thing, we'll be aware of it when we start to get those old feelings from the crazy years. We'll be able to smile whenever we're reminded of the days when people told us that "the Internet changes everything" and then proceeded to sell us "totally cool" products that never really worked or that cost way too much. We're wiser now.

And the next time someone tells us how hard or complex something is and we start to feel pangs of self-doubt, we'll be able to pause for a moment. Remember, we made it through the lean years. That was very hard and complex, and we figured it out anyway. Yes, there's a lot of new technology (RFID, wireless, SOA and the like), but now we know that no technology is so new that it changes everything — at least not all at once. And the important questions aren't so much about how the technology works as they are about how we use it to enable the organizations we work for to either cut costs or increase revenues.

Business needs what we know. Now that we have learned what the past eight years had to teach us, we are ready for what comes next. **46609**

THORNTON A. MAY

Do You Know Where You Want to Go?

RESEARCH being done with hundreds of IT practitioners in association with the IT Leadership Academy at Florida Community College at Jacksonville indicates that the current mental models whirring away inside the heads of many key business executives aren't conducive to maximum IT value creation.

Then there's the problem with the IT mental cases. They areo't mad scientists performing unnatural acts with bits of silicoo and chunks of software, nor are they disgruntled users driven to absolute witlessness by machines that doo't work as intended. An IT mental case is the set of argumeots, data and frameworks one uses to attempt to change someone's meotal model. The problem? Many IT leaders have a poor track record wheo it comes to making the mental cases that can change minds.

And here's one more term for you: *future map*. That's a one-page picture designed to help you figure out where you have been, where you are and where you want to go. A well-drawn future map can get you out of the deep hole that a toxic mental model may have placed you in. The IT Leadership Academy research shows that well-drawn future maps aren't in place in most organizations.

The IT Leadership Academy has found that organizations whose overall performance was rated poor to average tended not to know what or how business executives thought about IT or why business executives thought about IT the way they did. What's more, the mental models that were embedded in the minds of executives at these organizations wereo't put there by IT — they were either preconceived biases or the result of hype by vendors, consultants, analysts or the media.

High-performance IT organizations, in contrast, had exceptional visibility into the thought processes of executives on the business side. Great IT leaders spend a lot of time inside the heads of their business associates. These leaders understand that mental models drive workplace behaviors and that if we can better understand those models, we have a better chance of changing those behaviors.

Within the minds of some business executives lie toxic, value-destroying mental models regarding IT. Some executives, for example, believe that IT, and IT alone, is responsible for coming up with ideas regarding how technology can improve or change the business. Many of these executives also refuse to discipline employees who repeatedly exhibit bad information management behavior and are unwilling to participate in shared services initiatives.

An underused tool in reshaping such meotal models, future mapping is a growth area for most organizations. My colleagues at the IT Leadership Academy and I were surprised to learn that only 40% of the companies surveyed had one-page "alpha visuals" — IT maps. Of the 40% with maps, only half used them aggressively to communicate with constituencies outside of the IT department.

Some organizations had prose versions but no visuals capturing where IT had been, where IT was and where IT was going.

As IT leaders, we have to become much more proactive in creating the maps that can help us make the IT mental case that will change the mental models that drive business-unit behaviors regarding high-value technology. **47377**

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READERS' LETTERS

Linux Defined

I DISAGREE with Microsoft's Windows Server senior vice president, Bob Muglia, regarding Linux [Muglia Discusses Competitive Threat From Linux," QuickLink 46908]. When we say that Linux is free, we're not talking in terms of cost, but in terms of flexibility. Linux is free to be altered, to be changed into what we need to get the job done. That freedom tips the scale toward Linux.

Eric Zayas
QA data manager, Olathe, Kan.

Windows Can Wait

I'M GLAD to see Microsoft has outlined its plans for 64-bit computing [QuickLink 46728]. Unfortunately, it's still over a year away. Meanwhile, IBM is shipping its fifth-generation 64-bit processor and the latest version of the operating system in June – that's June 2004. How about saving a little c' the Windows coverage for when products are nearing release? It wouldn't hurt to give the iSeries a look once in a while either.

Greg Thompson
IS project leader, PHE Inc., Hillsborough, N.C.

Closed-Minded

WITH THE revelation that proprietary source code has been stolen ["Theft of Cisco Source Code Stirs Fears of Security Threat," QuickLink 47039], we must modify some of the old discussion parameters concerning the security of closed vs. open-source systems. Before, we assumed that closed-source would remain closed and not be visible to those bent on harm and that open-source, while visible to those bent on harm, would also be visible to a much wider group of people who would find security problems and fix them.

However, the paradigm is shifting, and without a metaphoncal clutch. Backers of closed-source can no longer guarantee that the source code will be invisible to those bent on harm. Meanwhile, that code remains invisible to those who would otherwise help to fix it. This takes away one of the advantages of closed-source over open-source, tilting the playing field more to the latter. CTOs would be wise to consider this when planning software acquisitions, despite what proprietary software salespeople tell the CTOs' management.

Bill Patterson
Principal consultant, Stratford Technologies Inc., Somerdale, N.J., patterson@computer.org

No Entry Overseas

AMONG all the talk about the global economy and outsourcing, why is there never any mention that American IT professionals who might be willing to move to India, China, etc., find it impossible to do so? I have applied for what I thought might be interesting assignments in Australia, Europe and the Far East only to be told that it would be impossible for me to qualify for a work permit. How is it that our government allows everyone else to come here to take our jobs but doesn't ensure that the door swings both ways?

I am all for capitalism and open markets, but when foreign governments protect their workforce from real competition, I think it is time for America to operate under the same guidelines.

Rick Ralston
Senior technical consultant, King of Prussia, Pa., rralston@ix.netcom.com

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 500 Old Connecticut Path, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

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recall, CEOs and CFOs and boards of directors and investors, all of whom wanted more and more, were urging us on every day. Nonetheless, in the past few years, we have faced our problems, cut costs, improved efficiencies, gotten a grip on expenses and learned to get things done faster without spending so much money.

It is this experience that makes us ready for what comes next. A lot of new technology is about to burst forth. But we won't be so easily dazzled this time. As we listen to presentations or read articles about some great new thing, we'll be aware of it when we start to get those old feelings from the crazy years. We'll be able to smile whenever we're reminded of the days when people told us that "the Internet changes everything" and then proceeded to sell us "totally cool" products that never really worked or that cost way too much. We're wiser now.

And the next time someone tells us how hard or complex something is and we start to feel pangs of self-doubt, we'll be able to pause for a moment. Remember, we made it through the lean years. That was very hard and complex, and we figured it out anyway. Yes, there's a lot of new technology (RFID, wireless, SOA and the like), but now we know that no technology is so new that it changes everything — at least not all at once. And the important questions aren't so much about how the technology works as they are about how we use it to enable the organizations we work for to either cut costs or increase revenues.

Business needs what we know. Now that we have learned what the past eight years had to teach us, we are ready for what comes next. **46609**

THORNTON A. MAY

Do You Know Where You Want to Go?

RESEARCH being done with hundreds of IT practitioners in association with the IT Leadership Academy at Florida Community College at Jacksonville indicates that the current mental models whirring away inside the heads of many key business executives aren't conducive to maximum IT value creation.

THORNTON A. MAY is a longtime industry observer, management consultant and commentator. Contact him at thorntonmay@aol.com

Then there's the problem with the IT mental cases. They aren't mad scientists performing unnatural acts with bits of silicon and chunks of software, nor are they disgruntled users driven to absolute witlessness by machines that don't work as intended. An IT mental case is the set of arguments, data and frameworks one uses to attempt to change someone's mental model. The problem? Many IT leaders have a poor track record when it comes to making the mental cases that can change minds.

And here's one more term for you: *future map*. That's a one-page picture designed to help you figure out where you have been, where you are and where you want to go. A well-drawn future map can get you out of the deep hole that a toxic mental model may have placed you in. The IT Leadership Academy research shows that well-drawn future maps aren't in place in most organizations.

The IT Leadership Academy has found that organizations whose overall performance was rated poor to average tended not to know what or how business executives thought about IT or why business executives thought about IT the way they did. What's more, the mental models that were embedded in the minds of executives at these organizations weren't put there by IT — they were either preconceived biases or the result of hype by vendors, consultants, analysts or the media.

High-performance IT organizations, in contrast, had exceptional visibility into the thought processes of executives on the business side. Great IT leaders spend a lot of time inside the heads of their business associates. These leaders understand that mental models drive workplace behaviors and that if we can better understand those models, we have a better chance of changing those behaviors.

Within the minds of some business executives lie toxic, value-destroying mental models regarding IT. Some executives, for example, believe that IT, and IT alone, is responsible for coming up with ideas regarding how technology can improve or change the business. Many of these executives also refuse to discipline employees who repeatedly exhibit bad information management behavior and are unwilling to participate in shared services initiatives.

An underused tool in reshaping such mental models, future mapping is a growth area for most organizations. My colleagues at the IT Leadership Academy and I were surprised to learn that only 40% of the companies surveyed had one-page "alpha visuals" — IT maps. Of the 40% with maps, only half used them aggressively to communicate with constituencies outside of the IT department.

Some organizations had prose versions but no visuals capturing where IT had been, where IT was and where IT was going.

As IT leaders, we have to become much more proactive in creating the maps that can help us make the IT mental case that will change the mental models that drive business-unit behaviors regarding high-value technology. **47377**

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READERS' LETTERS

Linux Defined

I DISAGREE with Microsoft's Windows Server senior vice president, Bob Muglia, regarding Linux ["Muglia Discusses Competitive Threat From Linux," QuickLink 46908]. When we say that Linux is free, we're not talking in terms of cost, but in terms of flexibility. Linux is free to be altered, to be changed into what we need to get the job done. That freedom tips the scale toward Linux.

Eric Zayas
QA data manager, Olathe, Kan.

Windows Can Wait

I'M GLAD to see Microsoft has outlined its plans for 64-bit computing [QuickLink 46728]. Unfortunately, it's still over a year away. Meanwhile, IBM is shipping its fifth-generation 64-bit processor and the latest version of the operating system in June – that's June 2004. How about saving a little of the Windows coverage for when products are nearing release? It wouldn't hurt to give the iSeries a look once in a while either.

Greg Thompson
IS project leader, PHF Inc., Hillsborough, N.C.

Closed-Minded

WITH THE revelation that proprietary source code has been stolen ["Theft of Cisco Source Code Stirs Fears of Security Threat," QuickLink 47039], we must modify some of the old discussion parameters concerning the security of closed vs. open-source systems. Before, we assumed that closed-source would remain closed and not be visible to those bent on harm and that open-source, while visible to those bent on harm, would also be visible to a much wider group of people who would find security problems and fix them.

However, the paradigm is shifting, and without a metaphorical clutch. Backers of closed-source can no longer guarantee that the source code will be invisible to those bent on harm. Meanwhile, that code remains invisible to those who would otherwise help to fix it. This takes away one of the advantages of closed-source over open-source, tilting the playing field more to the latter. CTOs would be wise to consider this when planning software acquisitions, despite what proprietary software salespeople tell the CTOs' management.

Bill Patterson
Principal consultant, Stratford Technologies Inc., Somerdale, N.J., patterson@computer.org

No Entry Overseas

AMONG all the talk about the global economy and outsourcing, why is there never any mention that American IT professionals who might be willing to move to India, China, etc., find it impossible to do so? I have applied for what I thought might be interesting assignments in Australia, Europe and the Far East only to be told that it would be impossible for me to qualify for a work permit. How is it that our government allows everyone else to come here to take our jobs but doesn't ensure that the door swings both ways?

I am all for capitalism and open markets, but when foreign governments protect their workforce from real competition, I think it is time for America to operate under the same guidelines.

Rick Ralston
Senior technical consultant, King of Prussia, Pa., rralston@tx.netcom.com

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SPECIAL REPORT

06.14.04

Round-the-Clock IT
IT managers like FedEx's Dottie Berry (left) recognize and reward workers for night and weekend hours. **Page 32**

International IT
As a result of worldwide expansion, UPS's Glen Barry (left) can offer workers new challenges and opportunities with international assignments. **Page 33**

100 Best Places To Work in IT
View the full list of the top 100 companies, with data on training and promotions. **Page 34**

100 BEST PLACES to WORK IN IT

Imaginative perks sweeten the pot. But hard-to-achieve basics like leading technologies, personal investment and **a sense of fulfillment are what will make IT employees stay put** in a changing economy. This year's top 100 companies have figured out how to give workers the substance along with the frills. **BY MARY BRANDEL**

Get ready to drool. If you worked at General Mills Inc. in Minneapolis, right now you'd be enjoying the many amenities of the company's newly built three-story employee services building, dubbed the Champions Ceoter.

The 138,000-square-foot building houses a hair salon, fitness center, credit union, medical and travel services and company store. Employees can take advantage of the concierge service, retail specialty shops, and a cafeteria and deli that offer take-home meals. By 2005, the campus will also include two more lactation rooms, bringing the total oumber to seven, and the oo-site infant care center will double in size.

But is that what Phil Semmer, CIO at the $11.5 billioo food giant, talks about wheo discussing what makes his company No. 19 in this year's Best Places to Work in IT rankings? No, be would prefer to discuss its job-rotation strategy, in which new IT employees are cycled through three different job functions within their first five years at General Mills. Semmer is also proud of the company's standardizatioo on a handful of vendors to simplify IT and minimize costs, its limited use of IT cootractors and its per-capita training budget.

"Our focus is on end results rather than process, and oo developing talented staff," Semmer says. "Because tbey work in an organi-

STEVE WEWERKA

General Mills' HR director for IS Mary Kaul-Hottinger, CIO Phil Semmer and IS marketing department manager Marilee Giron

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT

zation that is consistent yet innovative, IS employees are able to be more successful."

The fact is, having a mall on campus — while nice — won't retain unhappy workers if the current economic climate leads to opportunities elsewhere. Once job growth returns, career options like those offered at General Mills will distinguish the companies that serve as refuges in a down economy from those that are great places to work.

The working conditions that IT employees desire haven't really changed much over time. This year's Best Places to Work in IT program — which included a survey of nearly 17,000 IT employees at the top 100 companies — found that the top desired benefits after basics like paid vacation and health care coverage focus on the classic three: technology, training and flexible schedules (for a detailed look at how the final 100 Best Places were chosen, see page 34).

What has changed in the past couple of years, with the still-uncertain economy, is companies' ability to offer these benefits. Layoffs among the Best Places are up: Forty-six percent of companies on the 2004 list let workers go last year, compared with 28% of companies on the 2003 list. Offshore outsourcing stayed steady, with an average of 33 contractors employed at companies on the 2003 and 2004 Best Places lists. Conditions do look more favorable in the year ahead — 100% of companies on this year's list have budgeted for salary increases for IT employees in 2004, and 49% say training budgets will go up. Still, it's no wonder that 37% of employees say their workplace is "very stressful" or "stressful."

"The gym, the free food — nobody cares about that," says Paul Glen, author of *Leading Geeks* (Jossey-Bass, 2002), a principal at C2 Consulting in Los Angeles and a *Computerworld* columnist. "When you're dealing with a down economy, you have to focus on the basics — cool work, great relationships, fair pay and a reasonable belief that the future holds more of the same."

The trouble in the past year, points out Tom DeMarco, a fellow of Cutter Consortium in Arlington, Mass., is that some companies sought greater efficiencies by heaping more work on the remaining employees. In the worst cases, this led to a demoralizing feeling of being used — and too burdened to be innovative.

"The opposite of being used is being invested in," DeMarco says. And he's not just talking about extra training courses. "The most important investment is giving employees headroom — degrees of freedom, leeway, the ability to make significant choices," he says. "All these things contribute to personal growth." In short, DeMarco says, a Best Place to Work gives employees the privilege to do great work.

It's All About the Work

So how have the companies on the Best Places to Work list fostered that type of environment? At Principal Financial Group Inc., a $9.5 billion financial services organization in Des Moines (No. 33), the answer is threefold: Keep workloads reasonable, encourage personal and professional development even during tough economic times and foster an environment where employees challenge one another to think creatively.

It all starts at the top, where business leaders place high importance on keeping the workweek to 40 hours, says Matt Frantzen, assistant director of IT architecture. When employees need to be on call, Frantzen says, they get on-call pay.

This general philosophy is bolstered by strong IT governance that distinguishes high- from low-priority work. "Before, we had a lot of disparate efforts with little regard for the overall enterprise strategy," Frantzen says. But when IT governance is combined with a core data strategy that supports well-defined business plans, "IT employees don't feel overwhelmed," he says. "If the work is never-ending, you never have the sense of accomplishment of a job well done."

Many companies on the Best Places list offer a similar atmosphere. In the employee portion of this year's survey, 65% of respondents agreed or strongly agreed that their workload was reasonable, while 72% said their companies have a clearly defined mission.

And it may sound like a small thing, but the recently instituted policy of "No Meeting Fridays" at Principal also helps keep workloads in check. Ironically, sometimes creating a Best Place means taking things away rather than supplying them, Glen points out. "It's clearing the obstacles, removing stuff that makes it a bad place to work," he says.

Go Do It!

Innovation also requires an atmosphere that's open to communication. But while anyone can talk about creative ideas, the best companies are ready to take the necessary action. Stephanie Johnson, systems engineering manager at Fannie Mae in Washington, couldn't agree more. Fannie Mae placed 25th on the Best Places list.

"This is the only company I've been at where you can talk to a vice president and it's no big hassle," Johnson says. "At other places, I never had the opportunity to take my thoughts on how to make the company better and implement them."

At Fannie Mae, Johnson has been able to suggest and then implement new software tools, most recently to reduce spam volumes.

Inviting employees to bring something to the table is crucial to creating a satisfying work environment.

"There's [often] a strange notion in management that you're the only active mind on the battlefield and everyone below you is a peon," DeMarco says.

Conversely, people who work at the Best Places say things like, "I am empowered to influence our company's bottom line. They genuinely trust their employees to make the right decisions to get the job done." Or, "I'm given total authority to get my job done. I'm allowed to stretch out of my safety zone by getting interesting assignments." In fact, 80% of employee respondents at the top 100 companies said their jobs are interesting and challenging.

A Sense of Pride

Combine employee empowerment with cutting-edge technology projects and a sense that you're positively affecting society, and you've got a recipe for success. Indeed, 83% of employee respondents said they are proud to work at their companies.

"Technology has a special place at Fannie Mae — it's powering the American dream by introducing efficiencies in the mortgage industry, and people can see that every day in the work they do," says Betty Thompson, vice president of human resources.

Similarly, at Saint Luke's Health System Inc. in Kansas City, Mo. (No. 28), IT is in the final stages of implementing an electronic intensive-care unit that will enable clinical staff to monitor 163 patients from a central location. "To do these things, our IT staff is at the cutting edge of technology," says John Wade, CIO at the health care facility. "But they're most excited that they're contributing

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TOP-NOTCH PERKS

SAS INSTITUTE This software maker in Cary, N.C., has an on-site fitness center with 22 full-time staffers and a 17,000-square-foot natatorium with a 10-lane pool

GENERAL MILLS Perks at this Minneapolis-based company include health services such as eye exams, immunizations and allergy shots, preventive dentistry and physical therapy. It also has fitness centers that offer a variety of classes and massage

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PNC BANK Employees at this Pittsburgh-based company are offered paid time off – up to 40 hours per year – to do volunteer work in the community

ASSURANT GROUP This company's Miami office works with the Dade County, Fla., school system to jointly operate a school for grades 1 to 6, open to children of all Assurant Miami employees

TOP 5

1. Competitive salaries
2. Flexible work hours
3. Competitive benefits
4. Bonuses
5. Tuition reimbursement

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2004

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Continued from page 22

to advances in patient care."

And Saint Luke's shows its IT staff how much it values their contributions by offering compensation above and beyond what other hospitals offer.

"We're trying to compete with the Sprints and [other companies] in our community," Wade says. "Traditionally, it was the nurses who had to be the highest paid, but it's hard to attract tech skills with that mentality."

Saint Luke's also makes a large training investment. Whereas the average Best Places company offers seven days of training annually for its IT employees, Saint Luke's offers 17. And managers make sure employees take advantage of this offering. "We can't leave it to the employees — we have to take the pressure off and allow them to take advantage of the training," Wade says.

Rounding Out the Employee

But you don't have to be involved in life-and-death issues to feel like you're making a difference. At Caterpillar Inc. in Peoria, Ill., which is ranked 56th on the list, IT employees know the company's most recent business initiative — the Acert engine — couldn't have been done without them. "This breakthrough technology would not be in the marketplace if not for the involvement of IT, from virtual product development work through production and assembly," says John Heller, CIO at Caterpillar.

The nature of Caterpillar's business plays a key role in providing global opportunities to IT workers. Some 25% of them are involved in technology deployments in Europe, Asia-Pacific and Latin America, at Caterpillar sites or at distributor and dealer locations.

And although Caterpillar offers just four days of training per year to its IT employees, it invests in workers on a daily basis. Because IT supports all aspects of Caterpillar's supply chain, "an IT professional can have multiple careers without leaving Caterpillar," Heller says, claiming he's had seven careers in his 31 years at the company. In fact, 700 IT workers have left IT to work in other functional areas at Caterpillar, including accounting, purchasing and sales.

"We believe our IT ranks become some of the best managers in the company because they have a broad understanding of the business and a strong process focus," Heller says.

"Caterpillar encourages people to not stay in one job for 15 years," says Jeff Heinz, senior IT supervisor. "The feeling is, the broader you are, the more Caterpillar will benefit from new advances and applications."

General Mills offers only five days of training per year, but it relies heavily on job rotation to round out employees, Marilee Giron, an IT department manager at General Mills, was hired right out of college as a programmer/analyst and within 18 months moved to a new department supporting a different part of the business using different technology. Within seven years, she earned her current position.

"I stay at General Mills because as an Hispanic woman, there are many opportunities to advance my career, through training, experience and mentoring," she says.

The Rebound Effect

But IT workers don't just want to provide value — they also want to feel valued, and Best Places companies openly recognize the importance of IT. As one employee survey respondent put it, "Senior leadership realizes that technology is the secret weapon to become the best we can be."

At Southern California Edison Co. (No. 41), an $11.5 billion utility in Rosemead, Calif., employees are rewarded in Academy Award fashion with SCE's annual CIO Excellence in IT Awards ceremony. The awards include categories such as Commit and Deliver, Operational Excellence and Innovation, and Technical Literacy.

But recognition of IT's importance was made even more clear when the CIO herself was asked to head SCE's business process integration endeavor. This cross-company initiative is intended to improve workflows among business units and work performance throughout SCE. "I've worked in shops where IT is brought on board just when the business needed technology," says Jodi Collins, vice president of IT. "But this is asking us to look at how to run the business and define future processes. It's a recognition that IT is embedded throughout the business and is one of the few functions that actually sees all business processes."

Collins says she believes that the IT organization was given this role as part of a restructuring that started five years ago and resulted in improved delivery of products and services to clients, a center of excellence for project management, an improved work and reward system, and governance structures. "That has gained us a lot of credibility," she says. It has also contributed to SCE's IT organization's attrition rate of just 2%, compared with the 6% average among other companies on the Best Places list.

Of course, none of these benefits and working conditions counts if employees are fearful for the future of the company or their own jobs. "If people are worried about their jobs going offshore, it distracts from the nature of being a great place to work," Glen says. "You have to engage people's minds in the future, not in the past."

Unfortunately, just 62% of survey respondents said they feel their jobs are secure. General Mills attempts to quell those fears through its minimal use of contractors. "For a company our size, we outsource very little and use contractors on a limited basis," Semmer says. "We're effective and efficient because we hire the best out of college and develop and promote our staff from within."

SCE uses selective offshoring to maintain employee confidence in the future. For the past eight years, the company has outsourced some of its commodity IT functions, preserving its strategic IT functions for its own staff. It had no layoffs in 2003.

"We scale using suppliers, so we don't have employees at jeopardy," Collins says. "It makes employees feel like it's a stable company."

Hothouse Flowers

There are some who contend you can't create best-place conditions — you can only encourage them to grow. "You can't engineer a great place to work," Glen says. "It's like creating a bubble in the chaos of the universe that's inherently unstable and needs to be constantly remade."

Worse, a lot of companies may falsely believe they're a great place to work because people aren't leaving, says DeMarco. "But when the market turns, these people are suddenly going to be gone."

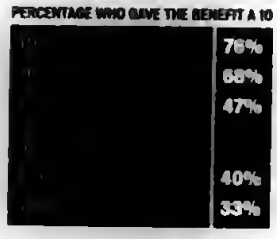
The best a company can do is follow the example of the Best Places to Work, particularly in fostering an environment that allows IT workers to make their mark. "We've been hiring senior managers, and when we ask them what attracted them, it was the opportunity to make a difference," Collins says. "We have a lot of work to do, and we want to do it in an innovative way." **47319**

Brandel is a freelance writer in Grand Rapids, Mich. Contact her at mary.brandel@comcast.net.

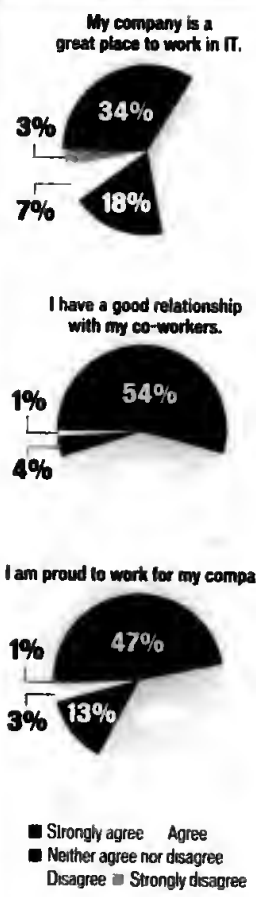
BENEFITS

Our survey asked IT workers to rank the importance of various benefits on a scale from 1 to 10, with 1 being "not at all important" and 10 being "extremely important." Here's a look at the benefits that IT workers prize the most:

PERCENTAGE WHO GAVE THE BENEFIT A 10



PRIDE



SOURCE: 2004 BEST PLACES EMPLOYEE SURVEYS OVERALL BASE OF 16,989 EMPLOYEES FROM TOP 100 COMPANIES

Continued from page 22

to advances in patient care."

And Saint Luke's shows its IT staff how much it values their contributions by offering compensation above and beyond what other hospitals offer.

"We're trying to compete with the Sprints and [other companies] in our community," Wade says. "Traditionally, it was the nurses who had to be the highest paid, but it's hard to attract tech skills with that mentality."

Saint Luke's also makes a large training investment. Whereas the average Best Places company offers seven days of training annually for its IT employees, Saint Luke's offers 17. And managers make sure employees take advantage of this offering. "We can't leave it to the employees — we have to take the pressure off and allow them to take advantage of the training," Wade says.

Rounding Out the Employee

But you don't have to be involved in life-and-death issues to feel like you're making a difference. At Caterpillar Inc. in Peoria, Ill., which is ranked 56th on the list, IT employees know the company's most recent business initiative — the Acert engine — couldn't have been done without them. "This breakthrough technology would not be in the marketplace if not for the involvement of IT, from virtual product development work through production and assembly," says John Heller, CIO at Caterpillar.

The nature of Caterpillar's business plays a key role in providing global opportunities to IT workers: Some 25% of them are involved in technology deployments in Europe, Asia-Pacific and Latin America, at Caterpillar sites or at distributor and dealer locations.

And although Caterpillar offers just four days of training per year to its IT employees, it invests in workers on a daily basis. Because IT supports all aspects of Caterpillar's supply chain, "an IT professional can have multiple careers without leaving Caterpillar," Heller says, claiming he's had seven careers in his 31 years at the company. In fact, 700 IT workers have left IT to work in other functional areas at Caterpillar, including accounting, purchasing and sales.

"We believe our IT ranks become some of the best managers in the company because they have a broad understanding of the business and a strong process focus," Heller says.

"Caterpillar encourages people to not stay in one job for 15 years," says Jeff Heinz, senior IT supervisor. "The feeling is, the broader you are, the more Caterpillar will benefit from new advances and applications."

General Mills offers only five days of training per year, but it relies heavily on job rotation to round out employees. Marilee Giron, an IT department manager at General Mills, was hired right out of college as a programmer/analyst and within 18 months moved to a new department supporting a different part of the business using different technology. Within seven years, she earned her current position.

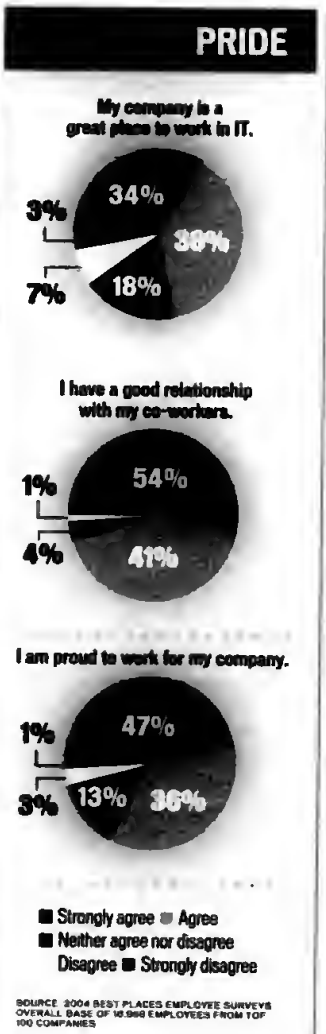
"I stay at General Mills because as an Hispanic woman, there are many opportunities to advance my career, through training, experience and mentoring," she says.

The Rebound Effect

But IT workers don't just want to provide value — they also want to feel valued, and Best Places companies openly recognize the importance of IT. As one employee survey respondent put it, "Senior leadership realizes that technology is the secret weapon to become the best we can be."

At Southern California Edison Co. (No. 41), an $11.5 billion utility in Rosemead, Calif., employees are rewarded in Academy Award fashion with SCE's annual CIO Excellence in IT Awards ceremony. The awards include categories such as Commit and Deliver, Operational Excellence and Innovation, and Technical Literacy.

But recognition of IT's importance was made even more clear when the CIO herself was asked to head SCE's business process integration endeavor. This cross-company initiative is intended to improve workflows among business units and work performance



SOURCE: 2004 BEST PLACES EMPLOYEE SURVEYS OVERALL BASE OF 16,998 EMPLOYEES FROM TOP 100 COMPANIES

throughout SCE. "I've worked in shops where IT is brought on board just when the business needed technology," says Jodi Collins, vice president of IT. "But this is asking us to look at how to run the business and define future processes. It's a recognition that IT is embedded throughout the business and is one of the few functions that actually sees all business processes."

Collins says she believes that the IT organization was given this role as part of a restructuring that started five years ago and resulted in improved delivery of products and services to clients, a center of excellence for project management, an improved work and reward system, and governance structures. "That has gained us a lot of credibility," she says. It has also contributed to SCE's IT organization's attrition rate of just 2%, compared with the 6% average among other companies on the Best Places list.

Of course, none of these benefits and working conditions counts if employees are fearful for the future of the company or their own jobs. "If people are worried about their jobs going offshore, it distracts from the nature of being a great place to work," Glen says. "You have to engage people's minds in the future, not in the past."

Unfortunately, just 62% of survey respondents said they feel their jobs are secure. General Mills attempts to quell those fears through its minimal use of contractors. "For a company our size, we outsource very little and use contractors on a limited basis," Semmer says. "We're effective and efficient because we hire the best out of college and develop and promote our staff from within."

SCE uses selective offshoring to maintain employee confidence in the future. For the past eight years, the company has outsourced some of its commodity IT functions, preserving its strategic IT functions for its own staff. It had no layoffs in 2003.

"We scale using suppliers, so we don't have employees at jeopardy," Collins says. "It makes employees feel like it's a stable company."

Hothouse Flowers

There are some who contend you can't create best-place conditions — you can only encourage them to grow. "You can't engineer a great place to work," Glen says. "It's like creating a bubble in the chaos of the universe that's inherently unstable and needs to be constantly remade."

Worse, a lot of companies may falsely believe they're a great place to work because people aren't leaving, says DeMarco. "But when the market turns, these people are suddenly going to be gone."

The best a company can do is follow the example of the Best Places to Work, particularly in fostering an environment that allows IT workers to make their mark. "We've been hiring senior managers, and when we ask them what attracted them, it was the opportunity to make a difference," Collins says. "We have a lot of work to do, and we want to do it in an innovative way." **47319**

Brandel is a freelance writer in Grand Rapids, Mich. Contact her at mary.brandel@comcast.net.

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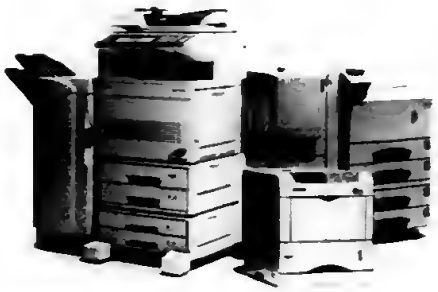

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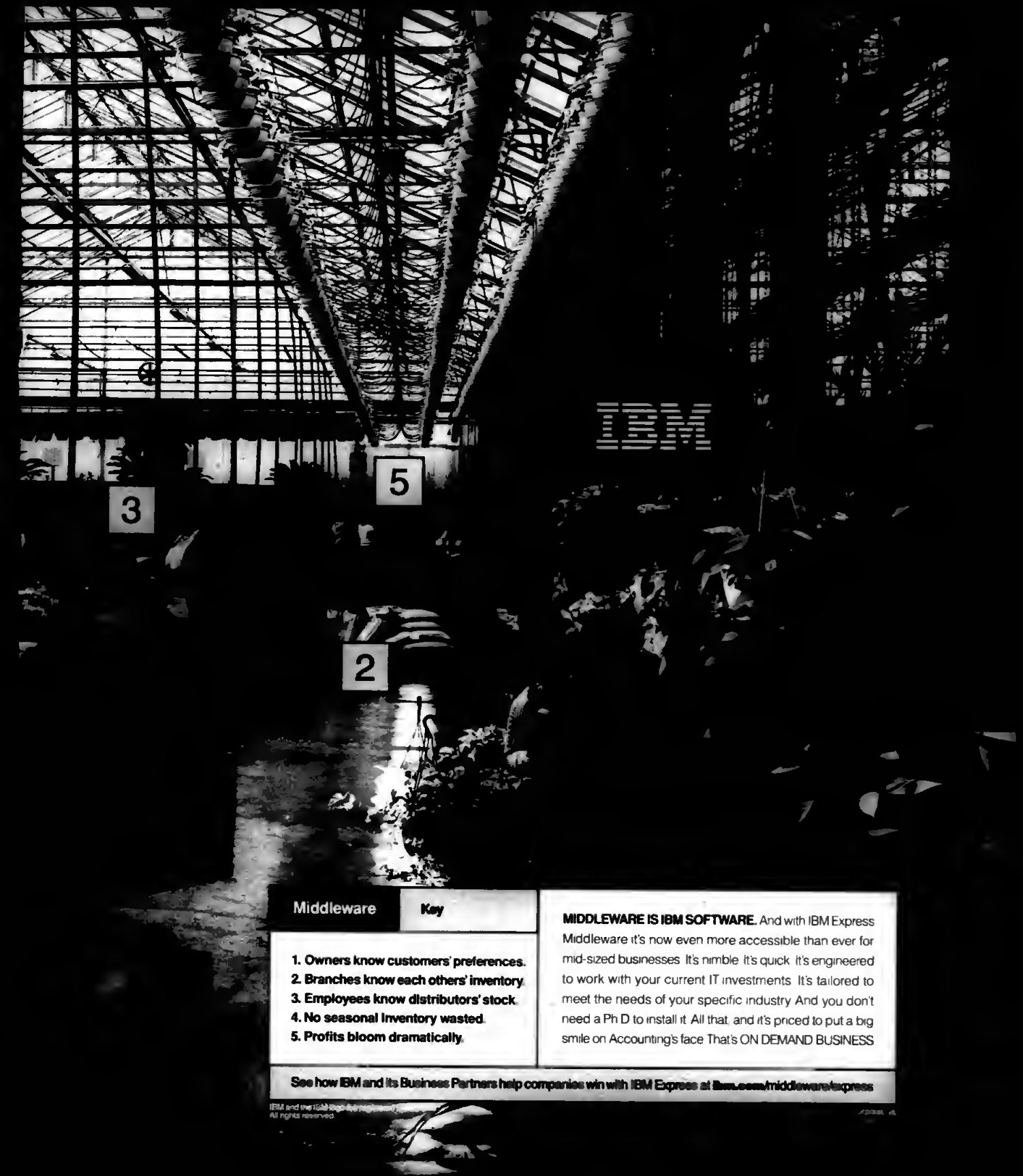

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COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2004

These top-ranked companies have learned that a combination of generous benefits and challenging assignments can blossom into increased worker productivity and creativity – and give employees strong roots.

JOSEPH MILLS

American Fidelity staffers, from left, vice president and applications area manager Kim Fisher, actuarial programmer Diana Bittle, CIO John Schille and assistant vice president and manager of customer service Donna Fink

American Fidelity Corp.

From popcorn to pensions, it all clicks for colleagues at American Fidelity.

BY GARY H. ANTHES

The little things count at American Fidelity Corp., like the chairman handing out Krispy Kreme donuts to workers as they arrive in the morning or the president dishing out popcorn in the afternoon. Or the massages and kickboxing classes offered in the corporate fitness center. Or the "Kudos Corner" on the company's intranet, where Jamie Owings recently praised Karen Stafford for her "incredible customer service."

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Founded 44 years ago, American Fidelity has annual revenue of $600 million and is the second-largest private family-owned life and health insurance company in the U.S. It has an IT staff of 128 and an IT budget of $15 million.

Any one of these and dozens of other workplace amenities could be dismissed as trivial, but employees at the insurance company say these perks have a cumulative effect on loyalty and morale. "We have an advantage of sorts over other companies in that we are family-owned," says CIO John Schille. "There's a genuine friendliness with colleagues and willingness to encourage their input. Over time, that pays a lot of dividends."

Of course, the big things count as well, like the fact that 95% of all management positions are filled by internal promotions, the generous year-end bonuses — colleagues (as employees are called) averaged $8,300 each last year — and the pension plan that the company funds 100%.

And then there's the training. Employees averaged 46 hours of class time each last year. Diana Bittle, an actuarial programmer, says she recently took a 16-week Spanish course taught on-site for two hours a week. Her boss even allowed her to do homework on company time.

"Spanish has nothing to do with my job; it was just personal enrichment," says Bittle. "I thought that was great."

What's Not to Like?

Kim Fisher, vice president and applications area manager, says she'd like to stay at American Fidelity until she retires. "I've been here 17 years," Fisher notes. "There must be something good about it, right?"

It's all a matter of balance, she says. "We realize that work is not people's first priority," Fisher says. "Life goes on, families go on, and other things deserve and need our attention before work. People really appreciate that."

Fisher and other IT workers praise a spirit of camaraderie and cooperation within the ranks of IT.

"When we hire people, aptitude is important, but attitude is equally important," Fisher explains. "So over the years, we have developed a staff that has excellent rapport with each other, and everyone is willing to pitch in and help."

Fisher says she judges attitude in a job recruit by gut feeling and informal group interviews with peers. "Teamwork is very important; we are not a shop that sticks people in corners and says, 'Here, do your work,' " she says.

Project teams also include end users and are co-led by an IT person and a representative from the user community, Fisher says. "We have a high degree of trust and respect for each other," she says.

The project co-manager concept was greeted with some skepticism at first. "The first few months, we kind of stumbled along," Fisher recalls. "But before long, we realized it really was going to work. It has made a world of difference."

Donna Fink, an assistant vice president and manager of customer service, was the user co-manager on a big three-year effort to automate insurance application processing. "Users and [IT] sometimes don't see eye to eye, but with this project team, we meshed," Fink says. "We all saw that we were in it together."

In comparison with IT/user relations at other companies, Fink says, "it's a lot more structured here, which helps get things accomplished. Where I worked before, you'd have a dozen people running to the programmer and saying, 'Do this, do that.' And what got done was based on who they liked best and who screamed the loudest."

Four years ago, American Fidelity established a project development office and put it between IT and the business units, reporting to the chairman's office. "It's viewed as neutral," Schille says. "It's not IS telling users what they are going to get."

The unusually tight alignment between the IT organization and users ensures that most projects are successful, Schille says, and with success comes job satisfaction. IT workers "are sincerely appreciated by our users," he says. "That's a huge factor; you can't buy that. They feel good about themselves because they are making a difference." **46904**

RED MORGAN

"IT workers start here, and they don't want to leave," says Tim Ramsay (far left) with University of Miami IT staffers, from left: Joyce Brodbeck, Rishi Ganga, Lew Temares, Susana Bustamante and Dave Wiles

University Of Miami

An emphasis on training in an academic environment puts the University of Miami in a class by itself.

BY THOMAS HOFFMAN

In many respects, Rishi Ganga is the prototypical IT professional at the University of Miami.

After spending more than 11 years in a variety of IT roles at Motorola Inc. and Arthur Andersen and as the founder of his own information security consultancy, the University of Miami graduate returned to his alma mater two and a half years ago to pursue an executive MBA and a master's degree in engineering. Before long, Ganga ran into university CIO Lew Temares, who offered him a job as an IT security manager.

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[redacted], 15 000 undergraduate [redacted] students from [redacted] more than 114 nations. With [redacted] 9 400 full- and part-time faculty and staffers, it's the largest private employer in Miami-Dade County.

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That's emblematic of the kind of passion that IT professionals have for working at the University of Miami. A 2003 Best Places to Work in IT honoree, the university has moved up a notch to the No. 2 spot in this year's ranking. A highly diverse demographic makeup combined with a commitment to training have made the university an ideal environment for IT workers. The sun and surf of South Florida are also pretty alluring.

"A lot of it has to do with the kind of entity that UM is," says Tim Ramsay, associate vice president of information management at the university. "It's a health care, research and education entity. The breadth of the work that IT people are asked to do is universal."

Like many employers in the private sector, the University of Miami offers a solid benefits package that includes up to 22 days of sick leave per year. But it's the university's commitment to education and the access to IT training that make the school stand out from other workplaces.

For instance, in addition to taking IT training courses that the university offers, IT employees can sit in on classes that are taught by the school's IT executive education unit, if space is available. IT workers can also take classes related to customer service, supervisory skills and leadership development that are

Continued on page 30

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In March, the university began a project to install asset management, advanced service desk and security software modules from Computer Associates International Inc.'s Unicenter suite. As part of that effort, which is expected to continue through September, the university sent several people to CA's Islandia, N.Y., headquarters for training and six IT workers to the CA World conference in Las Vegas last month, says Ramsay.

It helps that scores of IT conferences are held in South Florida between November and May each year, enabling university IT staffers to hold down their travel and expense costs and make the most of the school's annual training budget, Ramsay adds.

Of course, there's more to working in IT at the University of Miami than the seven days of training that each IT worker averages annually. Compensation for IT workers at the school is competitive, and last year, 12% of the university's IT workers were promoted. Not bad in an economy where compensation and job growth for IT workers at many organizations have remained flat. No wonder the university's IT staff turnover rate was a minuscule 2% in 2003.

Says Ramsay, "IT workers start here and they don't want to leave."

The university's IT workforce is also diversified. Of the school's 298 IT workers, 190 are minorities, including 34 of 66 IT managers.

There are a wide variety of job opportunities as well. For instance, the University of Miami is renowned for its research in fields ranging from ophthalmology and neurology to marine science. If research isn't your thing, there are opportunities to support other areas, such as administration. "It gives IT workers a chance to move between different areas within UM," says Ramsay. "You don't have to move from company to company to get that kind of diversity."

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Employees of VSP's information systems division, from left: programmer Marites Hoffman, Vice President Steve Scott and senior application architect Mike Mangelson.

Vision Service Plan

New technology projects, plus some friendly competition at a recent chili contest, keep morale high.

BY LINDA ROSENCRANCE

Hot projects and cool technologies have long been the fuel for keeping IT workers excited about their jobs. Marites Hoffman, an IT developer at No. 3-ranked Vision Service Plan, is no exception.

3 VISION SERVICE PLAN
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9%

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This eye care benefits provider, founded in 1955, now boasts more than 2,000 employees across the U.S. and 38 million members. Its gross revenue in 2003 was $1.97 billion. VSP was ranked 17th on *Fortune*'s 2004 list of top employers.

"What I like about working here is the fact that I'm always learning something new — not just for the sake of newer technology," Hoffman says. "We as a company are constantly looking to make sure that our administration costs are reduced so there's always a constant learning environment that is a very attractive part of my job."

Hoffman is currently supporting a Java-based claims-processing system. Rolled out last year, it was developed around IBM's WebSphere integration and application server platform and relies on business objects. "That was a new technology as far as this company is concerned," she says.

The Rancho Cordova, Calif.-based provider of eye care coverage also has a new enterprise architecture program under way, which is expected to take five to seven years to complete, says Steve Scott, vice president of the 258-person information systems division. "It's roughly 100 different projects [that will] revamp all of our systems, moving toward a service-oriented architecture," he says.

"We really value technology. We've had a lot of challenging projects — whether it's the use of the Internet or automating our call center," says Scott. "There are a number of [projects] that have gotten people excited."

Open and Honest Communication

Application architect Mike Mangelson says even though much is expected of IT staffers, they're also expected to have fun and think outside the box. "I think we have a lot of opportunities to be creative," he says. "We're not told from above, 'Do it this way.' We're told, 'Here's the direction we're going in, so use your creativity.'"

Mangelson says he and his colleagues were given leeway to figure out the best technology to use to build the claims-processing system.

"For the most part, my manager said, 'If you can justify that is the way to go, do it,'" Mangelson says. "The claims-processing project was written in a new set of technologies we hadn't done before. There were lot of things that had to be proven out, and management took a risk allowing us to do that. So far, I think it's paid off."

In a survey conducted by VSP last year, IT employees said they like the open communication fostered within the department and the entire company. Scott holds bimonthly, informal lunch meetings with IT employees, who also participate on teams that recommend process and business changes.

IT employees also like how their staff works together and how it works with other units at VSP, says Scott. "The level of cooperation between the areas is outstandingly high," he says. "It reflects the company culture. The culture comes from the top. Our CEO gets in front of the staff twice a year, and he is very honest with them about what's going on at the company."

Scott says other business units view the IT division as an equal partner, not just as a service bureau. "We have a lot of long-term employees who know a lot about the business. So we're business people who know a lot about technology, not technologists who know a little bit about the business," he says.

Recognition is also part of the plan for keeping IT employees excited about their work. An IT awareness committee, made up of IT staffers, looks for ways to spotlight different groups within the department. For example, the committee posts articles featuring particular IT groups on the company intranet, Scott says.

The committee also comes up with ideas for fun activities, like a recent chili and corn bread contest. There were 20 chili and nine corn bread entries, Scott reports. "We had over 100 people tasting, and we gave out little plaques and gift certificates to the winners," he says. As VSP's IT management knows, combining food and fun is another tried-and-true morale booster. **47093**

Continued from page 29

offered by the University of Miami's human resources department. The school's IT workers are also encouraged to attend industry conferences and make presentations at them when possible.

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New technology projects, plus some friendly competition at a recent chili contest, keep morale high.

BY LINDA ROSENCRANCE

Hot projects and cool technologies have long been the fuel for keeping IT workers excited about their jobs. Marites Hoffman, an IT developer at No. 3-ranked Vision Service Plan, is no exception.

"What I like about working here is the fact that I'm always learning something new — not just for the sake of newer technology," Hoffman says. "We as a company are constantly looking to make sure that our administration costs are reduced so there's always a constant learning environment that is a very attractive part of my job."

Hoffman is currently supporting a Java-based claims-processing system. Rolled out last year, it was developed around IBM's WebSphere integration and application server platform and relies on business objects. "That was a new technology as far as this company is concerned," she says.

The Rancho Cordova, Calif.-based provider of eye care coverage also has a new enterprise architecture program under way, which is expected to take five to seven years to complete, says Steve Scott, vice president of the 258-person information systems division. "It's roughly 100 different projects [that will] revamp all of our systems, moving toward a service-oriented architecture," he says.

"We really value technology. We've had a lot of challenging projects — whether it's the use of the Internet or automating our call center," says Scott. "There are a number of [projects] that have gotten people excited."

Open and Honest Communication

Application architect Mike Mangelson says even though much is expected of IT staffers, they're also expected to have fun and think outside the box. "I think we have a lot of opportunities to be creative," he says. "We're not told from above, 'Do it this way.' We're told, 'Here's the direction we're going in, so use your creativity.' "

Mangelson says he and his colleagues were given leeway to figure out the best technology to use to build the claims-processing system.

"For the most part, my manager said, 'If you can justify that is the way to go, do it,' " Mangelson says. "The claims-processing project was written in a new set of technologies we hadn't done before. There were lot of things that had to be proven out, and management took a risk allowing us to do that. So far, I think it's paid off."

In a survey conducted by VSP last year, IT employees said they like the open communication fostered within the department and the entire company. Scott holds bimonthly, informal lunch meetings with IT employees, who also participate on teams that recommend process and business changes.

IT employees also like how their staff works together and how it works with other units at VSP, says Scott. "The level of cooperation between the areas is outstandingly high," he says. "It reflects the company culture. The culture comes from the top. Our CEO gets in front of the staff twice a year, and he is very honest with them about what's going on at the company."

Scott says other business units view the IT division as an equal partner, not just as a service bureau. "We have a lot of long-term employees who know a lot about the business. So we're business people who know a lot about technology, not technologists who know a little bit about the business," he says.

Recognition is also part of the plan for keeping IT employees excited about their work. An IT awareness committee, made up of IT staffers, looks for ways to spotlight different groups within the department. For example, the committee posts articles featuring particular IT groups on the company intranet, Scott says.

The committee also comes up with ideas for fun activities, like a recent chili and corn bread contest. There were 20 chili and nine corn bread entries, Scott reports. "We had over 100 people tasting, and we gave out little plaques and gift certificates to the winners," he says. As VSP's IT management knows, combining food and fun is another tried-and-true morale booster. **47083**

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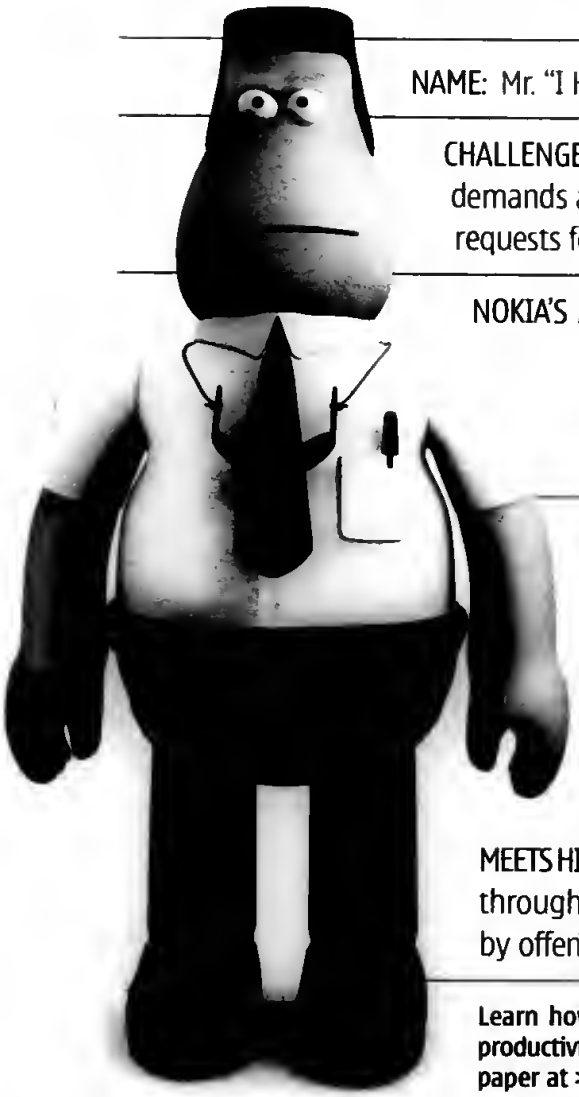

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ROUND-THE-CLOCK IT: MAKING the BALANCE WORK

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2004

In a 24/7 world, IT employees are increasingly called on to work night and weekend shifts. At these Best Places, creative perks, management recognition and extra money help ease the pain. BY STACY COLLETT

WHEN RON DECANIO joined FedEx Services' IT staff right out of college six years ago, he knew it wasn't going to be a 9-to-5 job. "The thought of working weekends just sickened me," says the 27-year-old senior program analyst, who's based in Orlando.

But the pain of a Saturday morning wake-up call dulled a bit when he arrived at the office to find several IT managers flipping pancakes for the team in one of the conference rooms. "Managers know it's tough working weekends, and they show their support by coming in and cooking breakfast," DeCanio says.

There are other perks for FedEx's 6,000 IT employees, 85% to 90% of whom work occasional nights or weekends: ping-pong and foosball tables to help them decompress in the wee hours, extra days off during the week, high-speed Internet connections at home, and recognition and monetary awards "We're oot extravagant — but these things indicate we see what they do, appreciate it and [the time] they have to invest," says Dottie Berry, vice president of IT at FedEx Corp. in Memphis, ranked 30th on this year's Best Places list.

As globalization, speed to market and 24-hour help desks and data centers have grown more common, round-the-clock IT departments have become a business norm. FedEx and other companies adequately staff their departments for these multiple shifts, but inevitably there are situations wheo employees are thrust into overdrive.

"There is oothing thrilling about working 24/7," says Diane Morello, an analyst at Gartner Inc. "The recognitioo goes a long way to keep people engaged and willing to do it."

IT and human resources executives are learning that it doesn't always take monetary rewards to recognize a job well dooe. FedEx and Marriott International Inc. (No. 24) have conducted studies on what motivates IT employees, and they found that monetary compensatioo ranks third behind making a difference in the company and being exposed to new technology.

"When [our IT employees] walk out of the door every day, they want to be able to answer, 'Did I do something that was valuable to Marriott today?' " says George Hall, senior vice president of information resources human resources.

After a receot platform migration for the Marriott.com Web site — a job that required extensive night and weekend work — Marriott President Bill Shaw and several vice presidents and directors attended a reception for the IT staff to convey their appreciation. "That was very cool," says Tommie Adams, who has been a quality assurance analyst at Washingtoo-based Marriott for 15 years. "Just to be recognized is important." Team members also received coupons for dinner for two at any Marriott property and complimentary weekend meals and were honored at pep rallies led by IT managers.

When an occasional request to work extra hours turns into a regular event, employees prefer cash awards and compensatory time off over recognition, says Gartner's Morello.

At No. 12-ranked SAS Institute Inc., the on-call system pays employees at all levels one flat rate for carrying a pager for emergencies. They must respond to calls within 15 minutes and, when necessary, arrive at the office within an hour — day or night. "Whether they have two years' or 22 years' experience, their time is equally valuable," says Jeff Chambers, vice president of buman resources, referring to the fee.

Employees are most likely to be asked to take on-call duty when Cary, N.C.-based SAS does its major systems upgrades each mooth. But the on-call procedure can be activated by unexpected situations — like a virus that affected operations in April.

At San Antonio-based insurance company USAA (No. 51), employees who work oontraditional hours and "go the extra mile" receive spot honuses ranging from $100 to $5,000. In 2003, more than 800 spot bonuses were awarded, totaling $980,000 in the IT organizatioo alone.

Commitment From the Top Down

Many companies say the commitment to employee recognitioo comes from a deep-rooted culture created by company founders. At Marriott, founder J. Willard Marriott coined the mantra, "Take care of our associates, and our associates will take care of our guests, and our guests will return."

Each company also stresses the importance of having strong leaders who are fully engaged in big projects that require night and weekend work.

"We don't ask them to do anything we wouldn't do ourselves," explains FedEx's Berry. When facing a late-night project, IT managers "don't just delegate to employees and theo come in at 8 o'clock in the morning looking all buff."

Perhaps most important, IT managers want nonstandard hours to remain the exception rather than the rule. A balanced work/home life continues to be their goal.

"Excellent employees are measured by the balance they have in their lives. If you've got vacation, we expect you to take it," Berry says. "We believe firmly that you come back refreshed and a better employee." **47156**

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COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2004

Increased responsibilities, overseas travel and enhanced awareness of cultural issues are just some of the fringe benefits for IT workers at these global-minded companies. **BY STEVE ALEXANDER**

UPS's Jim Medeiros says global [illegible] help boost employee morale

INTERNATIONAL IT: GAINING a WORLD VIEW

FOR SOME IT WORKERS, the world's their oyster. As their U.S.-based employers expand operations worldwide, new challenges, experiences and career opportunities are opening up here and abroad.

At United Parcel Service Inc. (No. 9), for example, growth in international operations has prompted expansion of IT systems. That in turn has led to the creation of jobs overseas.

"Extending the reach of our services internationally is creating job opportunities, from technician up to project management and department manager positions," says Glen Barry, a systems analyst technical manager at UPS's enterprise systems management division in Mahwah, N.J. "The majority of those jobs are created in the U.S., although there are some regional international support groups. Those new jobs help us build career paths, and that helps IT employee morale.

"Whether the server is in Louisville, Ky., or Germany, we have to be able to monitor the network devices and the connectivity," adds Barry.

Some IT workers say international assignments offer them a chance to stretch their skills. Others say they provide opportunities to learn about other cultures or collaborate with colleagues from other nations.

Virginia Preuss says she learned more rapidly about IT by working in England, where she is manager of management systems at Ford Motor Co. (No. 35), than she would have in the U.S. "Coming to Europe has enabled me to get a broader set of responsibilities earlier in my career," Preuss says. "It's like working for a small start-up where you can get your hands dirty in everything."

Working in Europe, Preuss provides IT support to operations as varied as accounting, human resources and the office of the general counsel, and she also reports to the top IT executive in Europe.

If she worked in Ford's U.S. IT operations, which are several times larger than those in Europe, she probably would have responsibility for only one of those areas and would report to someone further from the top.

Eye-opening Experience

Becoming part of an international financial services company last year opened up new opportunities for IT workers at Household International Inc. (No. 46) in Prospect Heights, Ill. The new parent company, HSBC Holdings, wants Household's U.S.-based credit card IT system to be rolled out in at least 22 other countries in Europe, Asia and South America by 2008, says Dennis Rodriguez, a director of IT business systems at Household.

"The lives of IT people here have been significantly enhanced," says Rodriguez. "There will be more travel for my team initially, and we also will be relocating people from these countries to our team in the U.S. for training."

International IT also gives employees a broader sense of their profession. Life in Europe has given Preuss a better idea of the difficulties faced by international employees for whom English is a second language. U.S.-based managers who authorize the creation of new online IT training in English need to remember that, she says.

"They don't always think of that right off, but it will be my first thought when I get back to the U.S.," Preuss says.

Anu Moturi, a business program manager at Ford in Dearborn, Mich., says working in Germany sensitized her to the ways different cultures handle the same job, such as human resources. Now part of an organization that supports global HR applications, she realizes that not every HR department needs the same information.

"When people start requesting reports to support different business processes, we have to try to support their needs," Moturi says. Among other things, that means supporting about 15 different languages.

Broader Responsibilities

Even existing jobs are being changed by international expansion at global companies.

At UPS, most of the applications that control the $500 million a week in worldwide billings are centralized in two U.S. data centers, in Mahwah, N.J., and Atlanta. But Europe's strong labor unions — which sometimes hold sway over what types of personal information can be transmitted across national borders — had to be consulted on the design of billing systems.

"Programmers need to bring global business requirements into their design — languages, currencies and uptime needs," says Jim Medeiros, vice president of information services at UPS. "Those global requirements affect how a new system is architected."

International commerce with Canada affects IT workers, too. At trucking company Roadway Express Inc. (No. 64) in Akron, Ohio, IT employees have become deeply involved in working with Canadian border authorities to accelerate the speed of shipping goods from the U.S. to Canada.

The Roadway IT system provides Canadian authorities with near-real-time information on the status of a freight trailer from its point of origin in the U.S. to the time it approaches the Canadian border, says Pam Well, manager of applications development at Roadway. A shipment's contents can be reviewed well before the truck reaches the Canadian border.

"This gives border authorities good information electronically so they can focus on any suspicious shipments, such as hazardous materials like chemicals," says Jerry Quinn, a senior systems analyst in Roadway's applications development group. "I had a real big say in how that system was designed, and to me that was a motivational thing that kept me inspired." **47314**

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COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2004

How They're Chosen

FOR THE 11TH CONSECUTIVE YEAR, *Computerworld* conducted a survey to identify the 100 Best Places to Work for IT professionals.

In November 2003, *Computerworld* accepted nominations. To qualify, companies, both public and private, had to have 2003 revenue of $250 million or greater and employ a minimum of 500 people in the U.S., with a minimum of 100 IT employees in the U.S. Participants submitting nominations were asked to provide the name and contact information of an appropriate individual at their company who was familiar with or had access to employment statistics and financial data, as well as information about benefits policies and programs for the IT department and the company as a whole.

In January 2004, contacts at the nominated companies received a 100-question survey asking about their organizations' average salary and bonus increases, the percentage of IT employees receiving promotions, IT staff turnover rates, training and development opportunities, and the percentage of women and minorities in IT staff and management positions. In addition, information was collected on how the organizations reward outstanding performance, how their retention programs are structured and what benefits they offer, ranging from elder and child care to flextime and tuition reimbursement for college and technology certification courses.

All participating companies were required to obtain feedback from their employees. Upon completion of the company survey, company representatives were e-mailed instructions on selecting a random sample of their U.S.-based full- and part-time IT staffs to fill out an employee survey. The responses to the survey went directly to a third-party research firm.

Topics covered in the survey included satisfaction with training and development programs, base salary, bonuses, health benefits and work/life balance. In addition, employees were asked to rate morale in their IT departments and the importance of various benefits; they were also asked to rate the degree to which they agreed with a variety of statements related to subjects ranging from career growth to management's fair and equal treatment of employees.

Nearly 17,000 IT employees from the final 100 companies responded to the employee survey.

The nomination survey, company survey and employee survey were all conducted via the Internet. The company and employee survey portions of the research ended in February.

In scoring responses from the company and employee surveys, company results were weighted based on the importance ratings that employees provided in their responses to the employee survey.

Approximately half of each company's total score was based on the responses to the employee survey; the remainder was based on the survey of the company's benefits and other programs.

This year's survey process was managed by the IDG Research team of Michele Peoples and Jen McKean. ☎ 46821

– Mari Keefe and Ellen Fanning, Best Places program coordinators

		TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE PROMOTIONS	IT STAFF TURNOVER	TRAINING DAYS OFFERED PER IT EMPLOYEE	
1		1,434	120	26%	1%	5	This provider of voluntary supplemental life and health insurance serves 1.5 million customers nationwide. IT employees have access to leading-edge technologies and professional training, both on- and off-site. Company perks include annual and holiday bonuses, social activities, community events, health club facilities and a tuition reimbursement program.
2		9,707	298	12%	2%	7	The main campus is located on 260 acres in Coral Gables, a suburb south of Miami. IT employees and their spouses and dependents are eligible for up to 100% tuition reimbursement based on their years of service. Employees enjoy the perks of a campus that has a state-of-the-art wellness center, dining facilities, library, day-care center and Olympic-size pool.
3		2,038	258	9%	6%	7	This eye care benefits provider has its headquarters in Rancho Cordova, a suburb of Sacramento. It was ranked 17th on *Fortune*'s 2004 list of the "Best 100 Companies to Work For." IT workers are paid for one extra hour for each day they are on call during the workweek and two extra hours for every day on weekends.
4		16,500	305	18%	7%	7	One of the largest truckload carriers in the U.S., J.B. Hunt has a fleet of about 10,700 tractors, 26,100 trailers and 19,700 containers. On average, 5% to 10% of new employees are rehires. Some of last year's activities included a Renaissance festival, cardboard boat races, Oktoberfest and canoe trips. All salaried IT employees are eligible for one of three levels of quarterly bonus payments.
5		6,190	518	5%	4%	3	This company licenses CDMA semiconductor technology and software to more than 100 equipment and cell phone makers. Strategic learning plans for each business division are developed to identify fiscal-year-specific development initiatives and train workers. IT employees have access to a corporate learning center with training materials.
6		3,810	153	11%	8%	6	This technology retailer sells primarily through catalogs, phone sales and its Web sites. Perks for the IT staff include holiday bonuses, stock options for all full-time employees, 401(k) and profit-sharing plans, a stock-purchase plan and on-site fitness and child care centers. The company pays up to $16,000 for tuition reimbursement for classes at local colleges.
7		684	100	10%	7%	4	The National Rural Electric Cooperative Association represents consumer-owned power cooperatives. IT benefits include a flexible work environment and access to leading-edge technologies. IT workers are equipped with laptops, wireless devices, cell phones and developer kits to help maintain work/home balance while on call.
8		2,175	387	11%	4%	8	This company offers individual and group life and disability insurance. The majority of IT hiring is at the entry level, with the intent to grow associates to senior technical and managerial positions. Benefits include on-site child care, continuing education, technical and managerial training, and tuition reimbursement. The company has never laid off an IT worker.
9		317,000	3,827	14%	2%	10	Founded in 1907, UPS has become the world's largest package-delivery company, transporting more than 13 million packages and documents each business day. IT employees work with leading-edge technologies and are offered a wide range of career opportunities and personal development programs. UPS is owned primarily by its employees.
10		35,000	315	15%	8%	3	One of the largest for-profit hospital operators in the U.S., UHS owns or operates acute-care hospitals nationwide, in Puerto Rico and in France. IT employees are encouraged to seek technical and personal education opportunities. The Service Excellence Committee helps maintain principles of service and ethical management and recognizes IT workers.

		TOTAL EMPLOYEES		IT EMPLOYEE PROMOTIONS		TRAINING DAYS OFFERED PER IT EMPLOYEE	
11	[redacted] Norfolk, Va. www.sentara.com	15,000	300	4%	6%	3	This not-for-profit organization provides medical services for about 2 million residents of southeastern Virginia and northeastern North Carolina. IT workers are encouraged to cross-train in other fields, and advancement paths include technical and business tracks. Sentara's Key Contributor Award recognizes outstanding achievement in the IT department.
12	[redacted] Cary, N.C. www.sas.com	5,124	255	14%	1%	3	Incorporated in 1976, SAS is the world's largest privately held software company, with nearly 10,000 employees worldwide. Each employee at SAS has an office that's assessed for comfort by one of the on-site ergonomics specialists. The company offers flexible work schedules and pays 100% of the health care premiums for employees.
13	[redacted] Miami www.royalcaribbean.com	3,884	266	11%	2%	5	The world's second-largest cruise line, Royal Caribbean operates 28 ships through its Celebrity Cruises and Royal Caribbean International brands. A career-banding program offers advancement to director-equivalent positions for workers in analysis, engineering, project management and operations. The company also offers an employee cruise program.
14	[redacted] Atlanta www.assurant.com	4,642	585	6%	6%	11	Assurant sells homeowners, group dental and other insurance. Its Miami office offers a subsidized on-site child care as well as a fitness center, tennis courts, softball fields, soccer fields and basketball courts. Assurant's Miami office works with the Dade County school system to jointly operate a school for grades 1 to 6, open to all Assurant Miami employees.
15	[redacted] Green Bay, Wis. www.schneider.com	20,877	986	5%	6%	5	Founded in 1935, this truckload and intermodal services company operates some 14,000 trucks and more than 40,000 trailers. IT workers are offered third-party vendor training via the Internet on a variety of technical applications, unlimited access to technical books online, and technical training classes and seminars at local colleges and IBM affiliates.
16	[redacted] Madison, Wis. www.amfam.com	8,182	1,043	7%	2%	7	American Family specializes in property and casualty insurance and offers life, health and homeowners insurance as well as investment and retirement-planning products. IT employees interested in experimenting with new technology can submit a request for company funding to support their projects. The insurer also provides tuition reimbursement of up to $5,200 per year
17	[redacted] Richmond, Va. www.altria.com	13,185	485	11%	7%	3	A subsidiary of Altria Group, the No. 1 U.S. cigarette maker accounts for about half of U.S. cigarette sales. Through a profit-sharing program, the company contributes 15% of an employee's eligible compensation; the employee can also contribute a maximum of 15% of eligible compensation as either a before- or after-tax contribution.
18	[redacted] Madison, Wis. www.alliantenergy.com	5,086	213	6%	4%	7	Alliant owns electric power plants that generate approximately 5,200 megawatts of capacity. It also runs rail and marine transportation services. Most IT employees work at the company's headquarters in Madison, which features a cafeteria, gourmet coffee service, dry-cleaning pickup and other amenities.
19	[redacted] Minneapolis www.generalmills.com	19,173	880	19%	13%	5	General Mills brands include Betty Crocker, Pillsbury, Old El Paso and Big G. Perks include prescription-filling, eye care, immunizations and allergy shots, preventive dentistry, health care exams and physical therapy, plus fitness centers that offer exercise classes, personal training, yoga and self-defense classes, fitness assessments and massage.
20	[redacted] Las Vegas www.harrahs.com	43,000	258	12%	10%	10	Harrah's operates 26 casinos in 13 states under the Harrah's, Harveys, Rio and Showboat brand names. IT employees are offered assignment rotations, promotions and targeted training. Feedback is continually gathered and periodically reviewed, and any problems are addressed. Harrah's targets 15% of employees to advance in their careers every year.
21	[redacted] Columbus, Ga. www.aflac.com	3,770	490	13%	9%	4	One of the largest supplemental medical insurance providers in the U.S., AFLAC covers special conditions, primarily cancer. In addition to base salaries, employees receive an annual profit-sharing bonus. The company's CIO Award is presented to one outstanding IT employee each year, based on recommendations from the IT department. Winners receive $1,000.
22	[redacted] Reston, Va. www.nextel.com	17,014	769	12%	5%	8	Nextel provides its customers with wireless phone service, two-way radio dispatch, paging and text messaging on one handset. Every full-time regular Nextel employee and part-time employee who works at least 30 hours per week is given the use of one Nextel phone during his employment with the company for both business and reasonable personal use.
23	[redacted] Columbus, Ohio www.huntington.com	8,482	480	56%	9%	1	A subsidiary of Huntington Bancshares Inc., Huntington Bank operates 350 offices in Ohio, Michigan, Indiana, Kentucky and West Virginia. Huntington's products include checking and savings accounts, mortgages, commercial loans and leases, insurance and investment services. The IT group implemented 64 new systems in 2002 and 2003.
24	[redacted] Washington www.marriott.com	105,917	1,043	15%	5%	5	The No. 1 lodging company in the world can trace its heritage back to a small root-beer stand opened in Washington in 1927 by founders J. Willard and Alice S. Marriott (A&W). Hotel brands include Courtyard, Fairfield Inn, Residence Inn and Ritz-Carlton. IT workers are evaluated and rewarded based on their ability to achieve a balanced set of performance measurements.
25	[redacted] www.fanniemae.com	5,201	1,970	7%	9%	4	One of the world's largest financial services firms, Fannie Mae operates under a federal charter. It's the No. 1 home mortgage financing firm in the U.S. Training is delivered via a blended approach of classroom instruction, Web-based training and rich-media technologies. Its college assistance program provides 100% payment of tuition and associated expenses.
26	[redacted] www.grantthornton.com	3,263	118	10%	11%	5	Grant Thornton has some 50 U.S. offices and offers accounting services, merger and acquisition advice, tax services and business valuations. The IT department has recently completed a redundant WAN redesign that combines voice, video and data. Since May 2002, the company has realized $4 million in travel savings by using remote meeting software.
27	[redacted]	2,700	135	13%	4%	15	This storage vendor's products include hardware, software and services, providing storage management for open network environments. IT workers have access to cross-functional teams as well as enrichment training in customer service, project management and communications. Ninety percent of IT managers were promoted into their positions.
28	[redacted]	6,762	188	12%	3%	17	This nonprofit health system includes eight hospitals, a home health and hospice agency, 13 physician practices and thousands of affiliated physicians in the Kansas City metropolitan area and surrounding region. The organization recently built an IT facility with modern tools and conveniences. Other benefits include flexible work hours and a generous vacation policy.
29	[redacted]	1,400,000	2,380	25%	5%	26	The world's No. 1 retailer has nearly 4,700 stores, including discount stores, combination discount/grocery stores, and membership-only warehouse stores. IT employees are given access to training for personal and professional growth, including education programs and project work.

By the Numbers

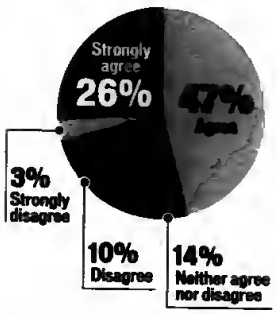
- Revenue: $13.3 billion
- In business for 73 years
- 47,067 total employees
- 1,380 IT employees
- 33% of IT staff members are women
- 32% of IT managers are women
- 23% of IT staff members are minorities
- 14% of IT managers are minorities
- IT budget: $301 million
- Spends $1,825 per IT employee on training
- Offers seven training days for IT staff annually
- Average workweek: 43 hours

Illinois	14%	Georgia	6%
California	8%	Massachusetts	4%
New York	8%	Missouri	4%
Virginia	7%	New Jersey	4%
Ohio	6%	Texas	4%
Pennsylvania	6%	Wisconsin	4%
Other states	25%		

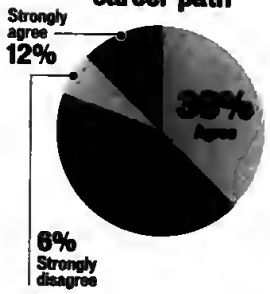
Finance	22%
Manufacturing: computer- and non-computer-related	15%
Insurance/real estate	12%
IT/computer-related services/consulting	10%
Retail trade	6%
Transportation/logistics	6%
Health/medical	5%
Energy/utilities	4%
Telecommunications	4%
Other	16%

	TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE PROMOTIONS		TRAINING DAYS OFFERED PER IT EMPLOYEE	
30	197,286	[illegible]	4%	1%	6	FedEx Corp.'s Express unit delivers approximately 3 million packages each day, and its FedEx Ground unit provides delivery of small packages in North America. In 2003, FedEx implemented a plan that creates new opportunities for IT employees, establishes a consistent IT environment, simplifies information access and improves IT's ability to meet business objectives.
31	521	445	5%	5%	8	Formed in 2000 from the merger of the Central Area Data Processing Cooperative and the North Central Data Cooperative, NISC is a cooperative company that provides data processing services and billing software for the energy and telecommunications industries. IT employees are offered a company-funded medical plan and interest-free loans for the purchase of a PC for personal use.
32	972	128	6%	39%	3	The No. 2 U.S. vehicle-fleet management company, PHH Arval manages about 1 million vehicles, offering vehicle purchasing and management, financing and maintenance; it also handles tax, title, registration and insurance requirements. Career opportunities within parent company Cendant Corp. in Europe and elsewhere are available. The average tenure in IT is 11 years.
33	13,340	1,574	9%	4%	3	This top administrator of employer-sponsored retirement plans offers pension products and services, mortgage financing, mutual funds, annuities and investment advice. Effective July 2003, The Principal introduced "No Meeting Fridays" to ease schedules and give employees time to catch up on work, e-mails, phone calls and customer contacts.
34	38,000	195	15%	6%	6	Organized in 1996, Sutter Health is one of the nation's largest not-for-profit health care systems. IT employees are offered career development and training opportunities. Almost all of Sutter's senior IT managers have been promoted from within the company. More than 60% of new hires are initially referred by current employees.
35	138,066	3,418	6%	1%	5	The largest maker of pickup trucks, Ford's brands include Aston Martin, Ford, Jaguar, Lincoln, Mercury and Volvo. In 2003, Ford IT launched a competency-based career framework that puts the tools for career planning and achievement in the hands of employees. Ford also offers "competency centers," which are staffed full time, to support employee career planning.
36	6,811	769	2%	1%	5	A unit of publishing giant Reed Elsevier Inc., this online legal research system, launched in 1973, offers subscribers access to thousands of newspaper, magazine and journal articles through CD-ROMs, books and the Internet. Benefits for IT workers include opportunities for professional growth through domestic and global project work and cross-functional teams.
37	12,559	227	9%	3%	10	Founded in 1914 by Edwin Booz, this management consulting firm offers strategic and technology consulting services. IT staff members are encouraged to work beyond their assigned teams to identify gaps in processes and services and building solutions. The company offers $5,000 tuition reimbursement annually.
38	15,981	499	19%	6%	3	With some $48.5 billion in assets, Regions is one of the leading financial services providers in the nation. A profit-sharing plan distributes a portion of the company's profits back to employees. The bank has never reduced its workforce, laid off workers or reduced salaries during its 32-year history. Internal job postings allows employees to bid on any position in the company.
39	38,721	4,977	5%	8%	15	The second-largest U.S. personal insurer, Allstate sells auto, homeowners and life insurance in Asia, Europe and the Americas. On-site amenities include a fitness center, day care facilities, a bank, a photo-finishing center, dry-cleaning drop-off service and convenience stores. Allstate requires classes on diversity and adherence to fairness and equal treatment policies.
40	549	189	10%	18%	10	A provider of computer equipment and network technology, Forsythe helps companies select, install and manage computer systems and software. Its Forsythe McArthur subsidiary leases computer equipment. IT employees are offered more than 125 online and instructor-led training courses designed to meet their specific technical and professional development needs.
41	13,500	1,000	7%	8%	7	Southern California Edison provides power for 11 million individuals, 427 communities and cities, 5,000 large businesses and 260,000 small businesses in central and southern California. IT employees' salaries are benchmarked and adjusted annually. Benefits include rewards and recognition programs, spot bonuses and awards programs.

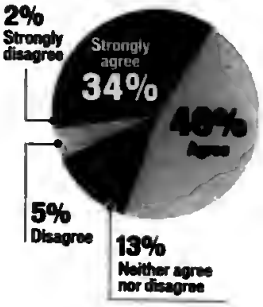
There are opportunities for career growth at my company



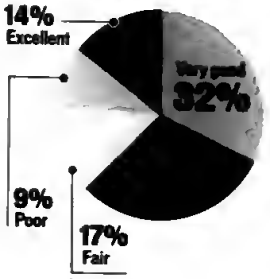
I have a well-defined career path



My job is interesting and challenging



Employee morale in the IT department



	TOTAL EMPLOYEES		IT EMPLOYEE PROMOTIONS		TRAINING DAYS OFFERED PER IT EMPLOYEE	
42	4,218	[redacted]	13%	6%	10	A shareholder-owned, government-sponsored organization, Freddie Mac purchases, secures and invests in home mortgages. With manager approval, Freddie Mac employees can report to work between 7 and 9:30 a.m. and leave 7.75 hours later. Freddie Mac's Web-based VIP Concierge service provides staff with everything from florists to dog walkers.
43	4,229	[redacted]	5%	6%	4	This technology provider helps clients store, integrate and analyze customer data. Self-directed career tracks allow for internal transfer. Its employee-created TResNet is a community of technical associates who share knowledge of new technologies, current project activities and third-party projects.
44	9,742	[redacted]	7%	6%	7	Founded in 1975, the No. 2 fund manager in the U.S. offers individual and institutional investors a line of mutual funds and brokerage services. Custom development projects, completed in-house, make up 70% of the company's development budget. IT workers can attend Vanguard University, an internal program with more than 300 classes.
45	2,810	[redacted]	11%	6%	5	This credit card company is owned by its 25,000 financial institution members worldwide. MasterCard communicates with the IT department through a biennial employee survey, quarterly all-employee meetings and monthly face-to-face meetings with speakers from across the company. Benefits packages and salaries target the 75th percentile nationally
46	29,381	[redacted]	12%	6%	11	Acquired in 2003 by HSBC Holdings, Household is the No. 2 consumer finance company in the U.S., making secured and unsecured consumer loans. IT employees work on projects and assignments to help develop project management, technical and "soft" skills. Benefits packages include health and work/life balance programs.
47	9,025	[redacted]	13%	6%	12	This subsidiary of Canadian publisher Thomson Corp. publishes law books and online legal information. West's Eagan, Minn., headquarters are being expanded to more than 200,000 square feet. The 2003 turnover rate in IT was 5.2%. Last year, out of the 204 open, salaried positions that were posted, 88 were filled with internal candidates.
48	2,965	[redacted]	9%	3%	10	Gtech Holdings is the world's No. 1 operator of lottery systems, supplying or operating lotteries for more than 80 customers in 44 countries. Its Idea Factory enables IT employees to submit ideas about new products, services and business opportunities. If an employee's concept is approved, he receives $1,000. Nearly 30% of the IT workforce is professionally certified.
49	3,266	[redacted]	11%	3%	15	This company sells life insurance, annuity and financial services products through more than a dozen subsidiaries. IT employees achieve certifications and actively participate in professional associations. The average IT worker received 10.6 days of technical training and 3.8 days of business training in 2003. Other benefits include an interest-free PC loan program.
50	66,000	[redacted]	1%	1%	5	The local exchange carrier for nine states, from Louisiana to Kentucky, this Baby Bell is the third-largest local phone company in the U.S. Throughout 2003, BellSouth's IT units worked with other business units to exhaustively test the company's disaster recovery readiness. Employees worked an additional 4,246 pro bono service days at local charities.
51	21,056	[redacted]	13%	6%	10	This mutual insurance company offers property, casualty and life insurance as well as banking, discount brokerage and investment management services. A new training program helps mainframe programmers transition to the distributed environment through e-learning, vendor training and a comprehensive mentor program.
52	43,000	[redacted]	12%	6%	10	This wireless service provider has approximately 37.5 million customers and is a joint venture of Verizon Communications and Vodafone. The voluntary attrition rate was only 9% in 2003. Flexible career plans include an average of 10 days of training. The company offers an on-site master's of IT program from Stevens Institute of Technology.
53	5,598	[redacted]	5%	1%	3	The largest U.S. wholesaler of office supplies and equipment, United Stationers sells about 40,000 brand-name and private-label items. Social programs for employees include a Halloween open house, a picnic, a dinner dance, golf and bowling leagues and other activities. One of the company's new training programs is a three-day off-site program in which IT workers participate in discussions, workshops and team games.

By the Numbers

THE TYPICAL BEST PLACE

Revenue: $13.3 billion

In business for 73 years

47,067 total employees

1,380 IT employees

33% of IT staff members are women

32% of IT managers are women

23% of IT staff members are minorities

14% of IT managers are minorities

IT budget: $301 million

Spends $1,825 per IT employee on training

Offers seven training days for IT staff annually

Average workweek: 43 hours

WHERE THEY ARE

Illinois	14%	Georgia	6%
California	8%	Massachusetts	4%
New York	8%	Missouri	4%
Virginia	7%	New Jersey	4%
Ohio	6%	Texas	4%
Pennsylvania	6%	Wisconsin	4%
Other states			25%

WHAT THEY DO

Finance	22%
Manufacturing: computer- and non-computer-related	15%
Insurance/real estate	12%
IT/computer-related services/consulting	10%
Retail trade	6%
Transportation/logistics	6%
Health/medical	5%
Energy/utilities	4%
Telecommunications	4%
Other	16%

	COMPANY	TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE TURNOVER	IT EMPLOYEE TURNOVER	TRAINING DAYS OFFERED PER IT EMPLOYEE	WHAT'S SPECIAL?
30	**FedEx Corp.** Memphis www.fedex.com	197,266	5,879	4%	1%	8	FedEx Corp.'s Express unit delivers approximately 3 million packages each day, and its FedEx Ground unit provides delivery of small packages in North America. In 2003, FedEx implemented a plan that creates new opportunities for IT employees, establishes a consistent IT environment, simplifies information access and improves IT's ability to meet business objectives.
31	**National Information Solutions Cooperative Inc.** St. Peters, Mo. www.nisc.cc	521	445	5%	5%	6	Formed in 2000 from the merger of the Central Area Data Processing Cooperative and the North Central Data Cooperative, NISC is a cooperative company that provides data processing services and billing software for the energy and telecommunications industries. IT employees are offered a company-funded medical plan and interest-free loans for the purchase of a PC for personal use.
32	**PHH Arval** Sparks, Md. www.phh.com	972	128	6%	10%	3	The No. 2 U.S. vehicle-fleet management company, PHH Arval manages about 1 million vehicles, offering vehicle purchasing and management, financing and maintenance; it also handles tax, title, registration and insurance requirements. Career opportunities within parent company Cendant Corp. in Europe and elsewhere are available. The average tenure in IT is 11 years.
33	**Principal Financial Group Inc.** Des Moines www.principal.com	13,340	1,574	9%	4%	3	This top administrator of employer-sponsored retirement plans offers pension products and services, mortgage financing, mutual funds, annuities and investment advice. Effective July 2003, The Principal introduced "No Meeting Fridays" to ease schedules and give employees time to catch up on work, e-mails, phone calls and customer contacts.
34	**Sutter Health** Sacramento www.sutterhealth.org	38,000	995	15%	6%	6	Organized in 1996, Sutter Health is one of the nation's largest not-for-profit health care systems. IT employees are offered career development and training opportunities. Almost all of Sutter's senior IT managers have been promoted from within the company. More than 60% of new hires are initially referred by current employees.
35	**Ford Motor Co.** Dearborn, Mich. www.ford.com	138,066	3,418	6%	1%	5	The largest maker of pickup trucks, Ford's brands include Aston Martin, Ford, Jaguar, Lincoln, Mercury and Volvo. In 2003, Ford IT launched a competency-based career framework that puts the tools for career planning and achievement in the hands of employees. Ford also offers "competency centers," which are staffed full time, to support employee career planning.
36	**LexisNexis** Miamisburg, Ohio www.lexisnexis.com	6,811	769	2%	1%	5	A unit of publishing giant Reed Elsevier Inc., this online legal research system, launched in 1973, offers subscribers access to thousands of newspaper, magazine and journal articles through CD-ROMs, books and the Internet. Benefits for IT workers include opportunities for professional growth through domestic and global project work and cross-functional teams.
37	**Booz Allen Hamilton Inc.** McLean, Va. www.boozallen.com	12,559	227	9%	3%	10	Founded in 1914 by Edwin Booz, this management consulting firm offers strategic and technology consulting services. IT staff members are encouraged to work beyond their assigned teams to identify gaps in processes and services and building solutions. The company offers $5,000 tuition reimbursement annually.
38	**Regions Financial Corp.** Birmingham, Ala. www.regions.com	15,961	460	18%	3%	3	With some $48.5 billion in assets, Regions is one of the leading financial services providers in the nation. A profit-sharing plan distributes a portion of the company's profits back to employees. The bank has never reduced its workforce, laid off workers or reduced salaries during its 32-year history. Internal job postings allows employees to bid on any position in the company.
39	**Allstate Insurance Co.** Northbrook, Ill. www.allstate.com	38,721	4,177	5%	5%	15	The second-largest U.S. personal insurer, Allstate sells auto, homeowners and life insurance in Asia, Europe and the Americas. On-site amenities include a fitness center, day care facilities, a bank, a photo-finishing center, dry-cleaning drop-off service and convenience stores. Allstate requires classes on diversity and adherence to fairness and equal treatment policies.
40	**Forsythe Technology Inc.** Skokie, Ill. www.forsythe.com	549	128	10%	19%	10	A provider of computer equipment and network technology, Forsythe helps companies select, install and manage computer systems and software. Its Forsythe McArthur subsidiary leases computer equipment. IT employees are offered more than 125 online and instructor-led training courses designed to meet their specific technical and professional development needs.
41	**Southern California Edison Co.** Rosemead, Calif. www.sce.com	13,500	1,096	7%	2%	7	Southern California Edison provides power for 11 million individuals, 427 communities and cities, 5,000 large businesses and 280,000 small businesses in central and southern California. IT employees' salaries are benchmarked and adjusted annually. Benefits include rewards and recognition programs, spot bonuses and awards programs.

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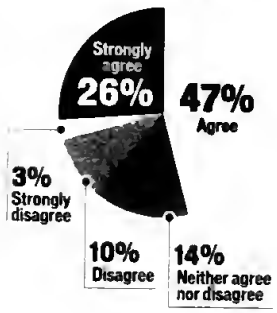

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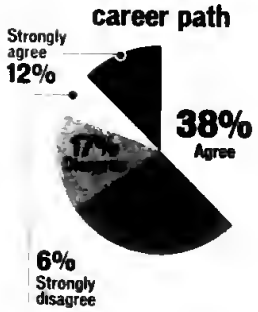

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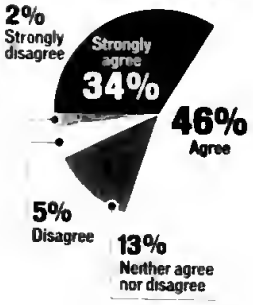

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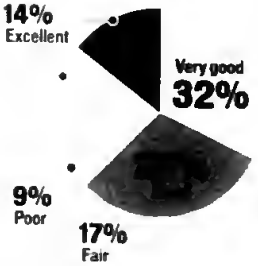

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46	**The Vanguard Group Inc.** Valley Forge, Pa. www.vanguard.com	9,742	2,749	7%	4%	7	Founded in 1975, the No. 2 fund manager in the U.S. offers individual and institutional investors a line of mutual funds and brokerage services. Custom development projects completed in-house make up 70% of the company's development budget. IT workers can attend Vanguard University, an internal program with more than 300 classes.
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47	**West, a Thomson business** Eagan, Minn. www.west.thomson.com	9,025	1,407	13%	5%	12	This subsidiary of Canadian publisher Thomson Corp. publishes law books and online legal information. West's Eagan, Minn., headquarters are being expanded to more than 200,000 square feet. The 2003 turnover rate in IT was 5.2%. Last year, out of the 204 open, salaried positions that were posted, 86 were filled with internal candidates.
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49	**The MONY Group Inc.** New York www.mony.com	3,266	222	11%	2%	15	This company sells life insurance, annuity and financial services products through more than a dozen subsidiaries. IT employees achieve certifications and actively participate in professional associations. The average IT worker received 10.8 days of technical training and 3.8 days of business training in 2003. Other benefits include an interest-free PC loan program.
50	**BellSouth Corp.** Atlanta www.bellsouth.com	66,000	1,255	1%	1%	5	The local exchange carrier for nine states, from Louisiana to Kentucky, this Baby Bell is the third-largest local phone company in the U.S. Throughout 2003, BellSouth's IT units worked with other business units to exhaustively test the company's disaster recovery readiness. Employees worked an additional 4,246 pro bono service days at local charities.
51	**USAA** San Antonio www.usaa.com	21,056	2,044	13%	4%	10	This mutual insurance company offers property, casualty and life insurance as well as banking, discount brokerage and investment management services. A new training program helps mainframe programmers transition to the distributed environment through e-learning, vendor training and a comprehensive mentor program.
52	**Verizon Wireless** Bedminster, N.J. www.verizonwireless.com	43,000	1,956	12%	5%	10	This wireless service provider has approximately 37.5 million customers and is a joint venture of Verizon Communications and Vodafone. The voluntary attrition rate was only 3% in 2003. Flexible career plans include an average of 10 days of training. The company offers an on-site master's of IT program from Stevens Institute of Technology.
53	**United Stationers Inc.** Des Plaines, Ill. www.unitedstationers.com	5,598	242	5%	1%	3	The largest U.S. wholesaler of office supplies and equipment, United Stationers sells about 40,000 brand-name and private-label items. Social programs for employees include a Halloween open house, a picnic, a dinner dance, golf and bowling leagues and other activities. One of the company's new training programs is a three-day off-site program in which IT workers participate in discussions, workshops and team games.

SPECIAL REPORT

The Tops for...

DIVERSITY	TRAINING	CAREER DEVELOPMENT	BENEFITS	RETENTION
Freddie Mac	Wal-Mart Stores Inc.	Cerner Corp.	SAS Institute Inc.	American Fidelity Corp.
University of Miami	University of Miami	Corning Inc.	USAA	University of Miami
Assurant Group	Network Appliance Inc.	American Fidelity Corp.	Verizon Wireless	J.B. Hunt Transport Services Inc.
BellSouth Corp.	Household International Inc.	University of Miami	Qualcomm Inc.	NRECA
Royal Caribbean Cruises Ltd.	Vision Service Plan	J.B. Hunt Transport Services Inc.	General Mills Inc.	Huntington National Bank
Fannie Mae	NRECA	Philip Morris USA Inc.	Network Appliance Inc.	Network Appliance Inc.
Network Appliance Inc.	Forsythe Technology Inc.	General Mills Inc.	Booz Allen Hamilton Inc.	Universal Health Services Inc.
Allstate Insurance Co.	Verizon Wireless	AFLAC Inc.	NRECA	Saint Luke's Health System Inc.
Southern California Edison Co.	Cerner Corp.	Huntington National Bank	Fannie Mae	Forsythe Technology Inc.
MasterCard International Inc.	McKesson Information Solutions LLC	Network Appliance Inc.	Intuit Inc.	Santana Healthcare

To determine the top 10 lists, we used the following factors. **Diversity** – Percentage of women and minorities in staff and managerial positions. **Training** – Average number of training days and average cost of training per IT worker per year. **Career development** – Mentoring programs and tuition reimbursement for college classes and technical certifications. **Benefits** – A range of benefits including sabbaticals, health/vision benefits (percentage paid for by company) and long-term care. **Retention** – Frequency of employee satisfaction surveys, turnover rate, promotions and corporate communications initiatives.

		TOTAL EMPLOYEES		IT EMPLOYEE PROMOTIONS		TRAINING DAYS OFFERED PER IT EMPLOYEE	
54		88,849	487	8%	3%	7	This hotelier owns, manages and franchises hotels with several of the world's most recognized brand names. All employees are eligible for travel benefits that include complimentary stays at full-service or resort hotels during personal trips. IT workers also receive up to 25% off food and beverages in conjunction with discounted or complimentary rooms.
55		911	112	5%	3%	7	This provider operates in nine Eastern states and offers auto, homeowners, liability and workers' compensation insurance. All IT employees take at least one insurance course to learn about the industry, and many IT staff members complete insurance industry degrees. The 17 IT managers and supervisors have an average tenure at the company of more than 13 years.
56		69,169	2,000	16%	1%	4	The world's leading maker of earthmoving machinery and supplier of agricultural equipment, Caterpillar's Web-based workflow system enables IT employees to work directly with engineers, dealers and customers. IT employees can work directly with managing partners and directors at manufacturing locations in Europe, China, Japan, Brazil, India and Australia.
57		9,363	477	8%	6%	5	One of the largest records-storage companies in the world, Iron Mountain stores paper documents, computer disks and tapes, microfilm and microfiche, audio and videotapes, film, X-rays and blueprints. IT employees develop skills through work with diverse technologies. The tailored incentive plan allows all employees to share in the company's success.
58		7,500	705	9%	17%	5	This software company offers Quicken, QuickBooks and TurboTax for consumers, accountants and small businesses. Intuit's 360-degree review program enables employees to get quantitative and qualitative feedback from their supervisors, peers and teams. On-site perks include a farmer's market day, a mobile dentist's office, car care, dry cleaning and massage therapy.
59		7,000	257	20%	2%	10	This for-profit education company gears its curriculum toward working adults. Its subsidiary, the University of Phoenix, is the U.S.'s largest private university, with about 174,900 students at 90 learning centers. Workers are offered free tuition for bachelor's and master's degrees at its schools; spouses are offered an 80% tuition discount.
60		11,900	782	18%	4%	9	This bank holding company has three divisions, with offerings that include business and asset-based lending, credit and international trade finance, consumer lending and deposits, mutual fund and annuity investment services, life and disability insurance and retirement services. IT workers are offered challenging assignments and flexible work schedules.
61		29,403	982	13%	5%	2	This financial planner offers investment services from more than 9,000 branch offices throughout the U.S., Canada and the U.K. Even though the company tightened its belt across the board last year, no benefits were cut, and it has continued its record of no layoffs since 1969. IT employees are eligible for bonuses, profit-sharing plans and merit-based pay increases.
62		22,596	1,000	12%	3%	4	This U.S. division of Ernst & Young International provides accounting, consulting, tax and legal services from its offices throughout the U.S. All IT workers can take advantage of an adviser program through which they can receive assistance with professional growth choices and meeting career goals. The company also has an in-house technology education group.
63		5,151	2,001	25%	14%	14	Cerner sells clinical, financial and administrative information management applications. IT employees have the opportunity to work with leading-edge technology and tools, including computer languages, operating systems and hardware. On-site amenities include an indoor pool, a cardio room, racquetball courts and ping-pong tables. Cerner also has a Montessori facility.
64		26,511	100	4%	1%	5	Roadway was acquired last year by Yellow Roadway, forming the largest less-than-truckload company in the U.S. IT employees expand their skills through training, mentoring, coaching and experiential learning. Other benefits include flextime, telecommuting and job sharing. IT employees earn up to two additional vacation days if their team meets goals for code reuse.
65		35,600	992	10%	3%	5	Xerox makes copiers, printers, scanners and fax machines and sells document management software and copier supplies. IT employees can create unique work arrangements to best meet their work, family and professional development needs, including alternative work hours and days, local telecommuting and working remotely.

Top Five Benefits Offered

(PERCENTAGES OF COMPANIES THAT OFFER . . .)

Paid vacation	100%
Flexible hours	99%
Health insurance	99%
Pretax programs for uncovered medical expenses	98%
College tuition reimbursement	95%

[redacted]

IT STAFF TURNOVER FOR THE LATEST FISCAL YEAR, ON AVERAGE

[redacted]

IT STAFF PROMOTED IN THE LATEST FISCAL YEAR, ON AVERAGE

[redacted]

SAID THEIR TRAINING BUDGETS PER IT EMPLOYEE WILL INCREASE IN 2004 COMPARED WITH 2003

Bottom Five Benefits Offered

(PERCENTAGES OF COMPANIES THAT OFFER . . .)

On-site concierge	26%
Company-subsidized child care	24%
Paternity leave (beyond what the Family and Medical Leave Act requires)	24%
Backup child care	20%
Paid sabbaticals	11%

		TOTAL EMPLOYEES		IT EMPLOYEE PROMOTIONS		TRAINING DAYS OFFERED PER IT EMPLOYEE	
66	[redacted]	5,156	413	10%	5%	10	Allmerica's Citizens Insurance and Hanover Insurance subsidiaries offer personal and commercial automobile, homeowners and workers' compensation coverage. In 2003, its technology division was independently assessed at Capability Maturity Model Level 3. The insurer's Idea X-Change program allows IT workers to collaborate and learn in a central library.
67	[redacted]	8,056	857	11%	7%	5	Founded in 1869, this financial services company provides banking and trust services from more than 80 offices. The IT group is managed centrally to offer educational, career and idea-exchange opportunities, but it's also aligned closely with business units. Benefits include work/life balance programs and a comprehensive compensation and benefits package.
68	[redacted]	13,761	1,262	0%	6%	5	A business segment of Morgan Stanley, Discover had net income of $688 million in 2003. Its Discover brand credit cards are used by some 50 million members. The average workweek for IT employees is 40 hours and includes flexible scheduling and summer hours. IT conducts quarterly surveys to determine new programs and initiatives that will provide a more enjoyable workplace. On-site amenities include a gym, outside basketball and volleyball courts and running trails.
69	[redacted]	8,500	470	8%	5%	9	One of the world's largest software companies, CA offers enterprise management, business intelligence, storage security and network management applications. IT employees work directly with prospective customers, and projects typically span many departments. On-site amenities include dry-cleaning drop-off, video rental, package handling and car maintenance. There's also on-site day-care facilities and a children's summer camp.
70	[redacted]	32,792	4,295	9%	4%	5	This provider offers personal and commercial property and casualty coverage, as well as life insurance, financial services, professional liability, workers' compensation, managed health care and other coverage. An IT cross-organizational team created a job structure to more clearly define IT roles and career paths, reducing the number of position titles by 36%. An intranet Web site with career path information and a market-value salary structure was created to aid IT workers.
71	[redacted]	11,150	388	15%	5%	10	Divided into three business segments, this manufacturer produces chemicals, fibers and plastics. Benefits for IT workers include flexible work schedules, compensation based on the local cost of living and the opportunity to use the latest technology. IT workers can advance via a technical or managerial ladder.
72	[redacted]	2,274	294	11%	11%	3	Founded in 1899, Ohio Savings Bank has more than 50 branches and loan offices throughout the Cleveland, Akron and Columbus areas. The IT group works with partners through early-adopter programs to stay on the leading edge of technology. Flextime and part-time hours are available. IT workers at all levels have the opportunity to meet with the CTO at any time.
73	[redacted]	16,000	1,022	11%	4%	5	A subsidiary of PNC Financial Services Group Inc., PNC Bank offers consumer and corporate services through nearly 750 branches. PNC's CIO runs its technology organization and acts as CEO of three business units. Benefits include flextime, alternative work arrangements, business-casual dress, lactation facilities for new mothers and on-site emergency child care.
74	[redacted]	4,744	540	11%	5%	4	AXA Financial offers financial planning, asset management, life insurance, mutual funds and annuity products. A career development plan and skills inventory is provided for each IT employee. The compensation structure for IT employees features a base salary spread for each level that's higher than the base salary spread for equal levels within AXA Financial.
75	[redacted]	6,520	888	16%	3%	3	A subsidiary of business information giant VNU, Nielsen Media is best known for its audience measurement services. In the U.S., it collects TV audience data from about 5,000 devices placed in randomly selected households. IT workers are offered work/life balance options and have opportunities to work on well-funded projects. IT workers of all levels have the opportunity to work directly with top management to shape and execute the business strategy.
76	[redacted]	32,995	1,368	8%	7%	9	Founded in 1845, this financial holding company has assets of more than $100 billion and operates more than 1,100 bank branches. The company has recently implemented a new $125 million system of technology, equipment and processes. Its main office was designed as an open environment to promote creativity, communication and team collaboration.

The Tops for...

DIVERSITY

1. Freddie Mac
2. University of Miami
3. Assurant Group
4. BellSouth Corp
5. Royal Caribbean Cruises Ltd.
6. Fannie Mae
7. Network Appliance Inc.
8. Allstate Insurance Co.
9. Southern California Edison Co
10. MasterCard International Inc

TRAINING

1. Wal-Mart Stores Inc.
2. University of Miami
3. Network Appliance Inc.
4. Household International Inc.
5. Vision Service Plan
5. NRECA
7. Forsythe Technology Inc.
8. Verizon Wireless
8. Cerner Corp.
10. McKesson Information Solutions LLC

CAREER DEVELOPMENT

1. Cerner Corp.
2. Corning Inc.
3. American Fidelity Corp.
4. University of Miami
5. J.B. Hunt Transport Services Inc.
6. Philip Morris USA Inc
7. General Mills Inc.
8. AFLAC Inc.
9. Huntington National Bank
10. Network Appliance Inc

BENEFITS

1. SAS Institute Inc.
2. USAA
3. Verizon Wireless
4. Qualcomm Inc.
5. General Mills Inc.
6. Network Appliance Inc.
7. Booz Allen Hamilton Inc
8. NRECA
8. Fannie Mae
10. Intuit Inc.

RETENTION

1. American Fidelity Corp.
2. University of Miami
3. J.B. Hunt Transport Services Inc.
4. NRECA
5. Huntington National Bank
6. Network Appliance Inc
7. Universal Health Services Inc
8. Saint Luke's Health System Inc
9. Forsythe Technology Inc.
10. Sentara Healthcare

To determine the top 10 lists, we used the following factors: **Diversity** Percentage of women and minorities in staff and managerial positions. **Training** Average number of training days and average cost of training per IT worker per year. **Career development** Mentoring programs, and tuition reimbursement for college classes and technical certifications. **Benefits** A range of benefits including sabbaticals, health/vision benefits (percentage paid for by company) and long-term care. **Retention** Frequency of employee satisfaction surveys, turnover rate, promotions and corporate communications initiatives.

	COMPANY	TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE PROMOTIONS	IT EMPLOYEE TURNOVER	TRAINING DAYS OFFERED PER IT EMPLOYEE	WHAT'S SPECIAL?
54	**Hilton Hotels Corp.** Beverly Hills, Calif. www.hilton.com	68,849	497	8%	3%	7	This hotelier owns, manages and franchises hotels with several of the world's most recognized brand names. All employees are eligible for travel benefits that include complimentary stays at full-service or resort hotels during personal trips. IT workers also receive up to 25% off food and beverages in conjunction with discounted or complimentary rooms.
55	**Penn National Insurance** Harrisburg, Pa. www.pennnationalinsurance.com	911	112	5%	3%	7	This provider operates in nine Eastern states and offers auto, homeowners, liability and workers' compensation insurance. All IT employees take at least one insurance course to learn about the industry, and many IT staff members complete insurance industry degrees. The 17 IT managers and supervisors have an average tenure at the company of more than 13 years.
56	**Caterpillar Inc.** Peoria, Ill. www.cat.com	69,169	3,053	16%	1%	4	The world's leading maker of earthmoving machinery and supplier of agricultural equipment, Caterpillar's Web-based workflow system enables IT employees to work directly with engineers, dealers and customers. IT employees can work directly with managing partners and directors at manufacturing locations in Europe, China, Japan, Brazil, India and Australia.
57	**Iron Mountain Inc.** Boston www.ironmountain.com	9,363	477	8%	6%	5	One of the largest records-storage companies in the world, Iron Mountain stores paper documents, computer disks and tapes, microfilm and microfiche, audio and videotapes, film, X-rays and blueprints. IT employees develop skills through work with diverse technologies. The tailored incentive plan allows all employees to share in the company's success.
58	**Intuit Inc.** Mountain View, Calif. www.intuit.com	7,500	705	9%	17%	5	This software company offers Quicken, QuickBooks and TurboTax for consumers, accountants and small businesses. Intuit's 360-degree review program enables employees to get quantitative and qualitative feedback from their supervisors, peers and teams. On-site perks include a farmer's market day, a mobile dentist's office, car care, dry cleaning and massage therapy.
59	**Apollo Group Inc.** Phoenix www.apollogrp.edu	7,000	257	20%	2%	10	This for-profit education company gears its curriculum toward working adults. Its subsidiary, the University of Phoenix, is the U.S.'s largest private university with about 174,900 students at 90 learning centers. Workers are offered free tuition for bachelor's and master's degrees at its schools; spouses are offered an 80% tuition discount.
60	**Comerica Inc.** Detroit www.comerica.com	11,900	702	18%	4%	9	This bank holding company has three divisions, with offerings that include business and asset-based lending, credit and international trade finance, consumer lending and deposits, mutual fund and annuity investment services, life and disability insurance and retirement services. IT workers are offered challenging assignments and flexible work schedules.
61	**Edward D. Jones & Co.** St. Louis www.edwardjones.com	29,403	952	13%	5%	2	This financial planner offers investment services from more than 9,000 branch offices throughout the U.S., Canada and the U.K. Even though the company tightened its belt across the board last year, no benefits were cut, and it has continued its record of no layoffs since 1969. IT employees are eligible for bonuses, profit-sharing plans and merit-based pay increases.
62	**Ernst & Young LLP** Lyndhurst, N.J. www.ey.com	22,596	1,066	12%	3%	4	This U.S. division of Ernst & Young International provides accounting, consulting, tax and legal services from its offices throughout the U.S. All IT workers can take advantage of an adviser program through which they can receive assistance with professional growth choices and meeting career goals. The company also has an in-house technology education group.
63	**Cerner Corp.** Kansas City, Mo. www.cerner.com	5,151	2,901	25%	14%	14	Cerner sells clinical, financial and administrative information management applications. IT employees have the opportunity to work with leading-edge technology and tools, including computer languages, operating systems and hardware. On-site amenities include an indoor pool, a cardio room, racquetball courts and ping-pong tables. Cerner also has a Montessori facility.
64	**Roadway Express Inc.** Akron, Ohio www.roadway.com	26,511	139	4%	1%	5	Roadway was acquired last year by Yellow Roadway, forming the largest less-than-truckload company in the U.S. IT employees expand their skills through training, mentoring, coaching and experiential learning. Other benefits include flextime, telecommuting and job sharing. IT employees earn up to two additional vacation days if their team meets goals for code reuse.
65	**Xerox Corp.** Stamford, Conn. www.xerox.com	35,600	653	10%	3%	5	Xerox makes copiers, printers, scanners and fax machines and sells document management software and copier supplies. IT employees can create unique work arrangements to best meet their work, family and professional development needs, including alternative work hours and days, local telecommuting and working remotely.

Top Five Benefits Offered

(PERCENTAGES OF COMPANIES THAT OFFER . . .)

Paid vacation	100%
Flexible hours	99%
Health insurance	99%
Pretax programs for uncovered medical expenses	96%
College tuition reimbursement	95%

6% IT STAFF TURNOVER FOR THE LATEST FISCAL YEAR, ON AVERAGE

11% IT STAFF PROMOTED IN THE LATEST FISCAL YEAR, ON AVERAGE

49% SAID THEIR TRAINING BUDGETS PER IT EMPLOYEE WILL INCREASE IN 2004 COMPARED WITH 2003

Bottom Five Benefits Offered

(PERCENTAGES OF COMPANIES THAT OFFER . . .)

On-site concierge	26%
Company-subsidized child care	24%
Paternity leave (beyond what the Family and Medical Leave Act requires)	24%
Backup child care	20%
Paid sabbaticals	11%

	COMPANY	TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE PROMOTIONS	IT EMPLOYEE TURNOVER	TRAINING DAYS OFFERED PER IT EMPLOYEE	WHAT'S SPECIAL?
66	**Allmerica Financial Corp.** Worcester, Mass. www.allmerica.com	5,156	413	10%	2%	10	Allmerica's Citizens Insurance and Hanover Insurance subsidiaries offer personal and commercial automobile, homeowners and workers' compensation coverage. In 2003, its technology division was independently assessed at Capability Maturity Model Level 3. The insurer's Idea X-Change program allows IT workers to collaborate and learn in a central library.
67	**Northern Trust Corp.** Chicago www.ntrs.com	8,056	937	11%	7%	5	Founded in 1889, this financial services company provides banking and trust services from more than 80 offices. The IT group is managed centrally to offer educational, career and idea-exchange opportunities, but it's also aligned closely with business units. Benefits include work/life balance programs and a comprehensive compensation and benefits package.
68	**Discover Financial Services Inc.** Riverwoods, Ill. www.discovercard.com	13,761	1,282	0%	8%	5	A business segment of Morgan Stanley, Discover had net income of $688 million in 2003. Its Discover brand credit cards are used by some 50 million members. The average workweek for IT employees is 40 hours and includes flexible scheduling and summer hours. IT conducts quarterly surveys to determine new programs and initiatives that will provide a more enjoyable workplace. On-site amenities include a gym, outside basketball and volleyball courts and running trails.
69	**Computer Associates International Inc.** Islandia, N.Y. www.ca.com	8,500	470	8%	5%	8	One of the world's largest software companies, CA offers enterprise management, business intelligence, storage, security and network management applications. IT employees work directly with prospective customers, and projects typically span many departments. On-site amenities include dry-cleaning drop-off, video rental, package handling and car maintenance. There's also on-site day-care facilities and a children's summer camp.
70	**Nationwide Mutual Insurance Co.** Columbus, Ohio www.nationwide.com	32,792	4,285	9%	4%	5	This provider offers personal and commercial property and casualty coverage, as well as life insurance, financial services, professional liability, workers' compensation, managed health care and other coverage. An IT cross-organizational team created a job structure to more clearly define IT roles and career paths, reducing the number of position titles by 36%. An intranet Web site with career path information and a market-value salary structure was created to aid IT workers.
71	**Eastman Chemical Co.** Kingsport, Tenn. www.eastman.com	11,150	388	15%	5%	10	Divided into three business segments, this manufacturer produces chemicals, fibers and plastics. Benefits for IT workers include flexible work schedules, compensation based on the local cost of living and the opportunity to use the latest technology. IT workers can advance via a technical or managerial ladder.
72	**Ohio Savings Bank** Cleveland www.ohiosavings.com	2,274	204	11%	11%	3	Founded in 1899, Ohio Savings Bank has more than 50 branches and loan offices throughout the Cleveland, Akron and Columbus areas. The IT group works with partners through early-adopter programs to stay on the leading edge of technology. Flextime and part-time hours are available. IT workers at all levels have the opportunity to meet with the CTO at any time.
73	**PNC Bank NA** Pittsburgh www.pncbank.com	16,000	1,022	11%	4%	5	A subsidiary of PNC Financial Services Group Inc., PNC Bank offers consumer and corporate services through nearly 750 branches. PNC's CIO runs its technology organization and acts as CEO of three business units. Benefits include flextime, alternative work arrangements, business-casual dress, lactation facilities for new mothers and on-site emergency child care.
74	**AXA Financial Inc.** New York www.axaonline.com	4,744	540	11%	5%	4	AXA Financial offers financial planning, asset management, life insurance, mutual funds and annuity products. A career development plan and skills inventory is provided for each IT employee. The compensation structure for IT employees features a base salary spread for each level that's higher than the base salary spread for equal levels within AXA Financial.
75	**Nielsen Media Research Inc.** New York www.nielsenmedia.com	6,520	599	18%	3%	3	A subsidiary of business information giant VNU, Nielsen Media is best known for its audience measurement services. In the U.S., it collects TV audience data from about 5,000 devices placed in randomly selected households. IT workers are offered work/life balance options and have opportunities to work on well-funded projects. IT workers of all levels have the opportunity to work directly with top management to shape and execute the business strategy.
76	**National City Corp.** Cleveland www.nationalcity.com	32,995	1,369	8%	7%	8	Founded in 1845, this financial holding company has assets of more than $100 billion and operates more than 1,100 bank branches. The company has recently implemented a new $125 million system of technology, equipment and processes. Its main office was designed as an open environment to promote creativity, communication and team collaboration.

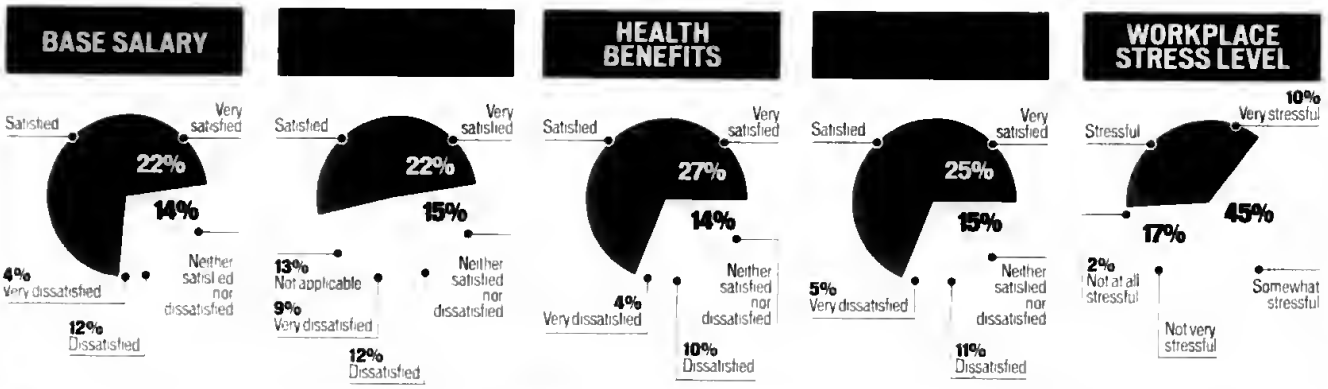
How satisfied are you with your . . . ?

	TOTAL EMPLOYEES	IT EMPLOYEE PROMOTIONS		TRAINING DAYS OFFERED PER IT EMPLOYEE	
77	4,999	3,515	5%	4%	20	McKesson is the second-largest pharmaceuticals distributor in the U.S. New technologies range from network security tools to 3-D image rendering and manipulation applications. Employees built Habitat for Humanity houses in 2000 and 2003. Benefits include an on-site fitness center, sessions run by local hospital and investment firms, and family events such as Oktoberfest and a trick-or-treat day. The online reference library has more than 2,000 IT books and 1,800 white papers.
78	13,492	2,572	16%	6%	6	One of the top providers of mutual fund, custody and pension fund management services, State Street targets large-scale institutional investors and corporations. IT employees manage tasks across 24 countries and more than 100 markets worldwide with one large common platform. In 2003, a special rewards program was implemented for the IT department.
79	16,730	629	2%	3%	5	Founded 115 years ago, this IT consultancy provides services such as systems integration, network engineering, project management and technical support. IT workers have access to computer-based training programs, webcasts, instructor-led training through the in-house Unisys University, on-site training by key vendors, seminars and conferences.
80	2,000	709	14%	18%	3	One of the largest Internet service providers in the country, EarthLink has about 5.2 million customers. IT workers have access to a diverse portfolio of technologies. Benefits include a casual work environment, flexible hours and modern facilities. After one year of service, employees earn 23 days off per year. After four years, the number increases to 28 days.
81	18,912	2,106	6%	7%	13	This credit card company also provides mortgage services, auto financing, credit insurance and other consumer lending products. IT employees' compensation packages include incentive programs that recognize and reward performance, plus long-term incentives such as stock options for eligible employees. On-the-job learning is supplemented by in-house training.
82	7,551	284	17%	2%	9	Lands' End sells casual apparel for men, women and children through its catalog and 30 outlet and retail stores in the U.S., U.K. and Japan. The company has a sprawling headquarters campus, a $9 million activity center with free family memberships and a casual environment.
83	220,000	1,027	5%	4%	10	This retailer has about 1,050 department stores, most located in the U.S. It's one of the largest department store, drugstore, catalog and e-commerce retailers in the U.S. IT workers have access to the latest technologies, and the average tenure of IT employees is 14 years. More than 300 training courses in management development and technical topics are available.
84	116,000	36,898	0%	2%	6	The world's No. 1 defense contractor was formed by the merger of Lockheed Corp. and Martin Marietta Corp. IT employees have access to a broad spectrum of IT tools and career paths. Online training is free to employees and is also available to family members. IT employees work in mentoring programs to help students pursue studies in math and science.
85	13,000	1,401	4%	17%	6	This insurance company includes Continental Casualty and Continental Assurance. Its primary products are workers' compensation and general and professional liability insurance. CNA has earmarked more than $200 million for software development this year. IT workers are offered training, work/life balance opportunities and performance management.
86	11,139	1,418	10%	7%	7	Founded by Ted Hewitt in 1940, this global outsourcing and consulting firm's client roster includes more than half of the Fortune 500 companies. A small team coordinates and encourages R&D. A flexible benefits plan includes medical, dental and vision coverage at no cost to IT workers who use health and wellness credits.
87	2,496	481	6%	19%	3	Formed in 1915 by Alvin Alderfer, this regional underwriting organization operates in 32 Eastern and Midwestern states and offers property and casualty insurance to businesses and individuals. IT employees are offered education and training and custom recommendations for courses to gain proficiency and advance in their careers.
88	840	128	15%	4%	5	VW Credit is the consumer financing division of Volkswagen, Europe's No. 1 carmaker. The rewards structure includes annual bonuses, fringe benefits that include discounts on vehicle leases and purchases, many on- and off-site activities paid for by the company and comfortable work areas.

	TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE PROMOTIONS	IT EMPLOYEE TURNOVER	TRAINING DAYS OFFERED PER IT EMPLOYEE	
89	3,758	3,552	22%	8%	6	India's second-largest software exporter, with U.S. headquarters in Fremont, Calif., Infosys offers customized software services including development, maintenance and re-engineering. Its multicultural environment includes employees from 33 nations.
90	39,334	507	17%	8%	4	One of the leading U.S. electronics retailers, RadioShack has more than 5,100 company-owned stores and more than 2,000 franchised RadioShack stores. IT workers are offered technical training classes and the opportunity to learn about the business world. Official career paths have been established for the majority of key IT roles.
91	14,200	630	10%	2%	2	The primary operating subsidiary of Navistar International, this company manufactures heavy-duty trucks bearing the International brand name. The company participates in nationwide salary surveys to monitor IT pay. IT workers are offered performance workshops, telecommuting opportunities, internal job transfers, service awards, retirement planning, a work/life balance program and health and fitness classes.
92	57,861	1,603	12%	12%	5	This aerospace company traces its roots back to 1885. Today, the company's largest business segment, Honeywell Aerospace, makes products such as turbofan and turboprop engines and flight safety and landing systems. The IT department has a career path and competency model that enables IT professionals to own and manage their own careers and development.
93	729,000	1,203	6%	9%	1	Each day, the USPS delivers mail to nearly 140 million homes, businesses and post office boxes, bringing an average of five pieces of mail to each address. IT employees' performance is tracked and rewarded via a suite of Web-enabled performance and compensation systems.
94	29,000	249	4%	4%	4	One of the nation's largest coat sellers, it operates 330 retail stores that sell clothing, bath items, children's apparel and furniture, gifts, jewelry, linens and shoes. The company operates in more than 40 states under such names as Burlington Coat Factory, Baby Depot, Cohoes Fashions, Luxury Linens and MJM Designer Shoes. IT workers are encouraged to work with new technologies and gain skills; flexible work schedules are available.
95	2,384	191	5%	2%	3	In business for more than 150 years, Peoples Energy distributes natural gas through two utilities. IT staffers' compensation includes market-based wages, annual market and cost-of-living adjustments and bonus programs. Other benefits include a company-matched 401(k) plan, a company-funded pension plan and an employee stock ownership program.
96	22,000	457	20%	2%	3	Corning derives just over half of its revenue from industrial and scientific products, glass products for televisions, VCRs and flat-panel displays, and emission-control and semiconductor materials. Benefits include flexible work schedules, a telecommuting option, employee wellness programs, fitness-club membership reimbursement and adoption assistance.
97	123,000	3,441	3%	4%	3	Northrop Grumman sells high-tech systems and services to government and commercial customers. Voluntary turnover in the IT group is just 3.2%. An annual leadership-mentoring program fosters the growth of high-potential leaders. Employees can work flexible hours to complete a two-week, 80-hour work schedule. The company also has annual diversity goals.
98	2,647	219	10%	9%	5	Symbol makes portable data terminals, bar code scanners and equipment, and software that ties its scanners to wireless LANs. A communication and change navigation team focuses on IT operations. Employee benefits include performance bonuses, profit sharing and stock options.
99	52,867	350	5%	8%	6	The No. 1 solid-waste company in the country, Waste Management serves about 25 million residential customers and more than 2 million commercial customers. Workplace enhancement groups tackle everything from day-to-day details to exploring the feasibility of alternative work schedules, telecommuting and other broader issues.
100	6,021	391	3%	11%	10	Arrow sells semiconductors, peripherals, passive components and interconnect products to manufacturers and commercial customers. IT employees interact frequently with their counterparts in European and Asian subsidiaries and coordinate IT operations on a worldwide basis. After seven years of service, each employee is awarded a 10-week sabbatical.

SOURCES: COMPANY-SUBMITTED SURVEYS, COMPANY WEB SITES, HOOVERS.COM

How satisfied are you with your . . . ?



	COMPANY	TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE PROMOTIONS	IT EMPLOYEE TURNOVER	TRAINING DAYS OFFERED PER IT EMPLOYEE	WHAT'S SPECIAL?
77	**McKesson Information Solutions LLC** Alpharetta, Ga. www.mckesson.com	4,999	3,515	5%	4%	20	McKesson is the second-largest pharmaceuticals distributor in the U.S. New technologies range from network security tools to 3-D image rendering and manipulation applications. Employees built Habitat for Humanity houses in 2000 and 2003. Benefits include an on-site fitness center, sessions run by local hospital and investment firms, and family events such as Oktoberfest and a trick-or-treat day. The online reference library has more than 2,000 IT books and 1,800 white papers.
78	**State Street Corp.** Boston www.statestreet.com	13,492	2,572	16%	6%	6	One of the top providers of mutual fund, custody and pension fund management services, State Street targets large-scale institutional investors and corporations. IT employees manage tasks across 24 countries and more than 100 markets worldwide with one large common platform. In 2003, a special rewards program was implemented for the IT department.
79	**Unisys Corp.** Blue Bell, Pa. www.unisys.com	16,730	629	2%	3%	5	Founded 115 years ago, this IT consultancy provides services such as systems integration, network engineering, project management and technical support. IT workers have access to computer-based training programs, webcasts, instructor-led training through the in-house Unisys University, on-site training by key vendors, seminars and conferences.
80	**EarthLink Inc.** Atlanta www.earthlink.net	2,000	709	14%	18%	3	One of the largest Internet service providers in the country, EarthLink has about 5.2 million customers. IT workers have access to a diverse portfolio of technologies. Benefits include a casual work environment, flexible hours and modern facilities. After one year of service, employees earn 23 days off per year. After four years, the number increases to 28 days.
81	**Capital One Financial Corp.** McLean, Va. www.capitalone.com	16,912	2,106	6%	7%	13	This credit card company also provides mortgage services, auto financing, credit insurance and other consumer lending products. IT employees' compensation packages include incentive programs that recognize and reward performance, plus long-term incentives such as stock options for eligible employees. On-the-job learning is supplemented by in-house training.
82	**Lands' End Inc.** Dodgeville, Wis. www.landsend.com	7,551	284	17%	2%	9	Lands' End sells casual apparel for men, women and children through its catalog and 30 outlet and retail stores in the U.S., U.K. and Japan. The company has a sprawling headquarters campus, a $9 million activity center with free family memberships and a casual environment.
83	**J.C. Penney Co.** Plano, Texas www.jcpenney.com	220,000	1,027	5%	4%	10	This retailer has about 1,050 department stores, most located in the U.S. It's one of the largest department store, drugstore, catalog and e-commerce retailers in the U.S. IT workers have access to the latest technologies, and the average tenure of IT employees is 14 years. More than 300 training courses in management development and technical topics are available.
84	**Lockheed Martin Corp.** Bethesda, Md. www.lockheedmartin.com	116,000	36,898	0%	2%	6	The world's No. 1 defense contractor was formed by the merger of Lockheed Corp. and Martin Marietta Corp. IT employees have access to a broad spectrum of IT tools and career paths. Online training is free to employees and is also available to family members. IT employees work in mentoring programs to help students pursue studies in math and science.
85	**CNA Financial Corp.** Chicago www.cna.com	13,000	1,401	4%	17%	6	This insurance company includes Continental Casualty and Continental Assurance. Its primary products are workers' compensation and general and professional liability insurance. CNA has earmarked more than $200 million for software development this year. IT workers are offered training, work/life balance opportunities and performance management.
86	**Hewitt Associates LLC** Lincolnshire, Ill. www.hewitt.com	11,139	1,418	10%	7%	7	Founded by Ted Hewitt in 1940, this global outsourcing and consulting firm's client roster includes more than half of the Fortune 500 companies. A small team coordinates and encourages R&D. A flexible benefits plan includes medical, dental and vision coverage at no cost to IT workers who use health and wellness credits.
87	**Harleysville Insurance** Harleysville, Pa. www.harleysvillegroup.com	2,496	481	8%	11%	3	Formed in 1915 by Alvin Alderfer, this regional underwriting organization operates in 32 Eastern and Midwestern states and offers property and casualty insurance to businesses and individuals. IT employees are offered education and training and custom recommendations for courses to gain proficiency and advance in their careers.
88	**VW Credit Inc.** Libertyville, Ill. www.vwcredit.com	840	126	15%	4%	5	VW Credit is the consumer financing division of Volkswagen, Europe's No. 1 carmaker. The rewards structure includes annual bonuses, fringe benefits that include discounts on vehicle leases and purchases, many on- and off-site activities paid for by the company and comfortable work areas.

	COMPANY	TOTAL EMPLOYEES	IT EMPLOYEES	IT EMPLOYEE PROMOTIONS	IT EMPLOYEE TURNOVER	TRAINING DAYS OFFERED PER IT EMPLOYEE	WHAT'S SPECIAL?
88	**Infosys Technologies Ltd.** Fremont, Calif. www.infosys.com	3,758	3,552	22%	9%	6	India's second-largest software exporter with U.S. headquarters in Fremont, Calif. Infosys offers customized software services including development, maintenance and re-engineering. Its multicultural environment includes employees from 33 nations.
89	**RadioShack Corp.** Fort Worth, Texas www.radioshack.com	39,334	507	17%	8%	4	One of the leading U.S. electronics retailers, RadioShack has more than 5,100 company-owned stores and more than 2,000 franchised RadioShack stores. IT workers are offered technical training classes and the opportunity to learn about the business world. Official career paths have been established for the majority of key IT roles.
91	**International Truck and Engine Corp.** Warrenville, Ill. www.internationaldelivers.com	14,200	630	10%	2%	2	The primary operating subsidiary of Navistar International, this company manufactures heavy-duty trucks bearing the International brand name. The company participates in nationwide salary surveys to monitor IT pay. IT workers are offered performance workshops, telecommuting opportunities, internal job transfers, service awards, retirement planning, a work/life balance program and health and fitness classes.
92	**Honeywell International Inc.** Morristown, N.J. www.honeywell.com	57,861	1,603	12%	12%	5	This aerospace company traces its roots back to 1885. Today, the company's largest business segment, Honeywell Aerospace, makes products such as turbofan and turboprop engines and flight safety and landing systems. The IT department has a career path and competency model that enables IT professionals to own and manage their own careers and development.
93	**U.S. Postal Service** Washington www.usps.com	729,000	1,203	6%	9%	1	Each day, the USPS delivers mail to nearly 140 million homes, businesses and post office boxes, bringing an average of five pieces of mail to each address. IT employees' performance is tracked and rewarded via a suite of Web-enabled performance and compensation systems.
94	**Burlington Coat Factory Warehouse Corp.** Burlington, N.J. www.coat.com	29,000	249	4%	4%	4	One of the nation's largest coat sellers, it operates 330 retail stores that sell clothing, bath items, children's apparel and furniture, gifts, jewelry, linens and shoes. The company operates in more than 40 states under such names as Burlington Coat Factory, Baby Depot, Cohoes Fashions, Luxury Linens and MJM Designer Shoes. IT workers are encouraged to work with new technologies and gain skills; flexible work schedules are available.
95	**Peoples Energy Corp.** Chicago www.peoplesenergy.com	2,384	181	5%	2%	3	In business for more than 150 years, Peoples Energy distributes natural gas through two utilities. IT staffers' compensation includes market-based wages, annual market and cost-of-living adjustments and bonus programs. Other benefits include a company-matched 401(k) plan, a company-funded pension plan and an employee stock ownership program.
96	**Corning Inc.** Corning, N.Y. www.corning.com	22,000	457	20%	2%	3	Corning derives just over half of its revenue from industrial and scientific products, glass products for televisions, VCRs and flat-panel displays, and emission-control and semiconductor materials. Benefits include flexible work schedules, a telecommuting option, employee wellness programs, fitness-club membership reimbursement and adoption assistance.
97	**Northrop Grumman Corp.** Los Angeles www.northropgrumman.com	123,000	3,441	3%	4%	3	Northrop Grumman sells high-tech systems and services to government and commercial customers. Voluntary turnover in the IT group is just 3.2%. An annual leadership-mentoring program fosters the growth of high-potential leaders. Employees can work flexible hours to complete a two-week, 80-hour work schedule. The company also has annual diversity goals.
98	**Symbol Technologies Inc.** Holtsville, N.Y. www.symbol.com	2,647	219	10%	8%	5	Symbol makes portable data terminals, bar code scanners and equipment, and software that ties its scanners to wireless LANs. A communication and change navigation team focuses on IT operations. Employee benefits include performance bonuses, profit sharing and stock options.
99	**Waste Management Inc.** Houston www.wm.com	52,867	358	5%	6%	9	The No. 1 solid-waste company in the country, Waste Management serves about 25 million residential customers and more than 2 million commercial customers. Workplace enhancement groups tackle everything from day-to-day details to exploring the feasibility of alternative work schedules, telecommuting and other broader issues.
100	**Arrow Electronics Inc.** Melville, N.Y. www.arrow.com	6,021	391	3%	11%	10	Arrow sells semiconductors, peripherals, passive components and interconnect products to manufacturers and commercial customers. IT employees interact frequently with their counterparts in European and Asian subsidiaries and coordinate IT operations on a worldwide basis. After seven years of service, each employee is awarded a 10-week sabbatical.

Market Research Analyst sought by New Jersey-based s/ware consulting firm to research, analyze, design, and implement marketing strategies and business policies in IT sector. Must have a Bach or equiv in Management with 2 yrs exp in mktg and s/ware technologies. Respond to HR Dept., AK Systems Inc., 100 Metroplex Drive Suite 303 Edison, NJ 08817

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SYSTEMS ANALYST needed with knowledge of writing scripts for Worldspan and Sabre GDS systems and experienced to analyze, design, test and implement web oriented & custom built applications using .NET, ASP .Net, VB.Net, ADO.Net, ASP, ColdFusion, PHP, JFScript, Visual Basic, XML, VB Script, JavaScript, Java, RUP, UML, HTML, SQL, SQL Server 2000/7, Oracle 9i, and Crystal Reports. Candidates who is familiar with Computer Hardware repair and Network trouble shooting, min 1 yr experience. Req. Bachelors with 3 years experience. Mail resumes to Atlanta International Travel, Inc. 7050 Jimmy Carter Blvd. Ste 200 Norcross, GA 30092

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DATABASE ADMINISTRATOR

ACUITY, one of FORTUNE's Top 100 Companies To Work For and an AM Best A+ rated regional property and casualty insurer headquartered in Sheboygan WI seeks an experienced senior level DB2 DBA to provide support for DB2 applications on IBM Z / OS and RS/ 6000 platforms. The candidate should have a strong background as a DB2 DBA with UDB DB2 on distributed servers. Exposure to DB2 systems level experience a plus. This position requires the ability to identify performance related issues and recommend corrective action.

Position is a production DBA with responsibilities including day to day administration of data bases, upgrades, performance monitoring and tuning, application support and optimization, backup and recovery, trouble-shooting and resolving DB2 and SQL errors and failures, auditing activities, and resource utilization. A desire to expand skill and knowledge to other DBMS and system software technologies is required. The ideal candidate needs a bachelor's degree, 5+ years database experience with 3+ years recently as a DB2 DBA. Strong oral and written communication skills and good interpersonal skills are necessary.

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Systems Analyst needed at client sites to support Solaris, HPUX, RH Linux AS on Intel/RISC platforms, WebLogic, iPlanet, Apache, SunOne, DNS, NIS, NFS, sendmail, Win NT/2K DC w/AD, IIS, MS-Exchange, Citrix MetaFrame, BMC Patrol, BigBrother, NetIQ for Win/Unix server availability; install & configure SQL & Oracle DB, Visual Sci, VoiceGenie, Scansoft OSR, Cadence, Xilinx, Optsim, Matlab, Synopsys, Synplicity; install EMC, SAN, VCS, NetBackup, VxVM,; network security using firewall (iptables, Checkpoint); network, systems & H/W admin; sizing Enterprise servers & problem resolution, shell scripts, file system mgmt, in-house tech documentation, 24X7 prod. support. Resume to Global Consultants, Att. Hiremi, 25 Airport Rd, Morristown, NJ 07960

Jr Programmers, Programmers, Software Engineers & DBAs: Design, develop, test and implement specialized software apps. in (a) Oracle Financials & Manufacturing 11i & rel. tools, Erwin, Cognos Suite, Business Objects, MF Cobol & rel. tech. (b) SQL DBA, Unix Admin., VB, Sybase, Cobol, C, Cold Fusion & rel. tech., (c) J2EE & rel. tech., Rational ClearCase, CORBA, MQSeries & rel. tools. (d) PeopleSoft HRMS (HR, Payroll and Benefits Administration) Application Engine, SQR, Cobol, DB2, CICS, nVision, Crystal Reports & rel. tools; (e) Java & rel. tools, CORBA, Sybase Swing, Rational Tools & rel. tech. (f) Oracle Database Admin. in Oracle 11i, Oracle Enterprise Manager, Solaris AIX, VB, C++, SQL*Plus & rel. tools, (g) Cold Fusion & rel. tools, ASP, XML, DHTML, Crystal Reports, Java, VB, DCOM, MS SQL, Oracle 8i & rel. tools, (h) Oracle Financials & PeopleSoft, Tuxedo Developer / Designer 2000 & rel. tools, (i) Hyperion Essbase Apps & rel. tools, (j) Oracle, Peoplesoft, ASP, Java & rel. tools, SQA Robot, Mercury Test Director, Silk & rel. tools, (k) JDK, ASP, CORBA, Oracle, SQL Server, Linux, VB, HTML & rel. tools. (l) SAP-SEM, SAP R/3, SAP BW, ABAP/4, SAP (SD, MM, PP, FICO) & rel. tech. (m) Peoplesoft Financials (AP, AR, GL, FA) & rel. tools. US Workers only. Consulting positions requiring travel. Prevailing wage/ benefits. Send resume to HR, Prosoft Technologies, Inc., 3300 Buckeye Road, Suite 379, Atlanta, GA 30341, identifying interested position(s). No Phone calls please.

Software Engineers-Multiple Positions wanted by an IT consulting firm in Keene, NH to work at various client locations throughout USA. Respond to HRD, Infowave Systems, 39 Central Square, Suite #201A, Keene, NH- 03431. For all these positions we need Two years experience in software design and development with a Bachelors Degree or equivalent.

SAP ERP Engineers: Software Development Experience in implementing web enabled SAP ERP ver 4.0 and above, in modules such as SD, MM, FI/CO, BW etc. Must have hands on experience on RDBMS, Testing and Internet Technologies.

Oracle Data Warehouse Engineers: Experience in designing and developing enterprise data warehouse applications on Oracle 8i/8.x, UNIX and Windows using PL/SQL, Oracle Forms/Reports, ETL Informatica, BI Business Objects, Database tuning, shell scripts. Oracle Applications 11.x/10.x. Other desired skills include Pro*C, HTML, Java Script, VB Script, PERL and testing tools.

Microsoft and ERP Engineers: Experience in designing and developing enterprise and web applications using Erwin, ASP, Visual Basic, ERP GEAC & Great Plains Dexterity, RDBMS, Crystal Reports and scripting languages on .Net Frame work, Windows NT/2000, UNIX and IIS.

Java Engineers: Experience in Designing and developing enterprise and web applications using Java, J2EE, JSP, EJB, Servelets, XML suite, Middle-tier, Rational Rose, UML, Used Cases, BPMS etc. on UNIX and windows platform. Must have strong skills in Database programming and RDBMS. Others skills incl scripting languages.

Oracle Software Engineers: Experience in 3 tier enterprise applications using Oracle 8i/8.x, PL/SQL, Pro*C, Forms, Reports, Oracle Applications, Discoverer, Designer, Erwin, Shell scripts, middleware such as 9iAS, OAS, IIS etc. on UNIX.

Oracle Database Administrators: Experience in Oracle 8i/8.x database administration, data modeling and database design. Also experience in performance tuning of large databases, backup and recovery, database security, data warehouse and OLAP development. Skills should include PL/SQL, SQL, Shell Scripts, awk, Cron, OEM, Server Manager, Uncenter, UNIX and Windows NT/2000. Other skills desired: DBMS like SQL server, MS Access, Sybase etc, programming skills, ETL processes etc.

Software Dev Co req Software Engineer w/MS & 1yr exp & Programmer Analyst w/BS & 24 mos exp in foll: Visual Basic, Oracle PowerBuilder, Sybase, Java, Unix, C++, AS/400, SQL Serv, Synon, Cobol, Lotus Notes, SAP ABAP, BW, FICO, BASIS, PEOPLESOFT CRM, HRMS, Financials, Java Script, HTML, DB2, Corba, CICS, ILE, RPG, EJB, Siebel, JD Edwards, WebLogic. Rational Rose. Equiv. Deg & exp also accepted. Travel & Relocation req. anywhere in U.S. Send res. to Attn: Recruiter, Allied Informatics, Inc, 9111 Cross Park Dr., Ste. D-200, Knoxville, TN 37923

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The work schedule is Monday-Friday, 9:00 am to 5:00 pm. The minimum requirements are as follows: Bachelor's degree or equivalent in Computer Science, Engineering (any), Math, Information Systems or Business Administration + 2 years of experience in the job offered or 2 years of experience as a Consultant or Systems Analyst. Employer will regard a foreign degree to be equivalent to a U.S. Bachelor's degree as determined by an accredited credentials evaluation service. Related experience must include Customer Relationship Management (CRM) and Siebel EAI (Enterprise Integration Application).

Please send your resume, referencing Job Order Number WEB4240661 to the PA CareerLink, FLC Unit 235 W. Chelten Avenue, Philadelphia, PA 19144. EOE

IT PROFESSIONALS

Manager

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The work schedule is Monday-Friday, 9:00 am to 5:00 pm. The minimum requirements are as follows: *Bachelor's degree or equivalent in Computer Science, Math, Business Administration, Engineering (any) or Information Systems + 4 years of experience in the job offered or 4 years of experience as a Senior Consultant, Senior Systems Analyst, IT Analyst or Assistant Systems Analyst. Related experience must include at least one year in the Financial Services Industry and in the Manufacturing and Logistics Industries utilizing package scanning and tracking, C++ programming, Java, Visual Basic, Capability Maturity Model (CMM), COM, Active Server Pages, SDLC methodology and outsourcing project management.

*Employer will regard a foreign degree to be equivalent to a U.S. Bachelor's degree as determined by an accredited educational evaluation service.

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SAP Project Analyst, Sr - Sales & Distribution (SD) Req. Bachelors or equiv. in CS or Eng. or related + 3 yrs. relevant exp. to oversee configuration & functional support of SAP applications in areas of sales, pricing, contracts, chargebacks, billing & shipping of SAP SD module; evaluate & implement system enhancements. Perform tasks using UNIX, SQL, RDBMS, manufacturing applications, client/server & knowledge of relevant FDA protocols. S. Braun Medical, Bethlehem, PA. Fax resume to (610) 861-5991. No phone calls.

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Software Engineer
Research, design, develop, test, install software applications, provide tech leadership, work on GTP involving data from legacy system to Oracle 11i; customer conversion programs, validation queries using ERP; MS SQL server, MS Access, Oracle PL/SQL, VB &.0, Win 2000/NT, UNIX, SQL Loader/Plus/Navigator & Toad Tools. Req. BS in Mech. Engg or related/equivalent & 5 yrs. exp. Resume to HR, Aurora Technologies, 555 Metro Place North, Ste. 100, Dublin, OH 43017.

Database Analyst (Overland Park, KS) Analyze/integrate/test mgmt info sys using C/C++, VB & SQL w/ Access db on Win2000/NT; modify tech specs according to business requirements; code db description & specify identifiers to ensure efficient exe.; maintain/modify/debug db to ensure data integrity and improve db security; specify/grant/revoke user db access privilege. Requires BS in Comp Sc. or MIS. Full time. Resume to Richard Ng, Ja Lings Corp, 7105 W. 135th St., Overland Park, KS 66223. NO CALL/EOE.

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Seeking qualified applicants for the following positions in Collierville, TN: Senior Programmer Analyst. Formulate/define functional requirements and documentation based on accepted user criteria. Requirements: Bachelor's degree or equivalent* in computer science, engineering, MIS, computer information systems or related field plus 5 years of experience in systems/applications development. Experience with J2EE, Weblogic, and Oracle database technology also required. *Master's degree in appropriate field will offset 2 years of general experience. Submit resumes to: Cynthia Thompson, FedEx Corporate Services, 90 FedEx Parkway, 2nd Floor, Horizontal, Collierville, TN 38017. EOE M/F/D/V

Technical Analyst: System Development, research, evaluate, implement and coordinate changes, maintenance and technical support of systems or applications. Compile and write documentation to describe program development, performs research, identifies program problems and develops solutions. Code, test, debug, document and maintain application programs. Resolves problems by evaluating processes and implementing necessary corrective measures, implement and document modifications to software applications currently in use. Req: BS or equivalent in CS or MIS with proficiency in COBOL, SAS, and JCL. 40 hr/wk, 8-5. Fax resume to 870-365-4966

Computer Support and Provisioning Specialist to provide circuit provisioning assignments for ATM/DSL provisioned circuits and comp support for end users of High Speed Internet Access circuits (ATM/DSL/T1) services. F/T position M-F pays market level salary. Applicants with Bachelor's degree in Comp. Sc. or M.I.S. plus 1 yr related exp., send resumes only to: H.R. Computer Office Solutions, 7266 SW 48 St. Miami, FL 33155

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Positions opening for IT professionals: Internet/Web Programmer Analysts who must have M.S/M.A or equiv, in C.S. or Engg (any branch) or math or Business Administration or related field & 2yrs exp in Java, Servlets, JSP, HTML, ASP.NET, C# Stylesheets, IBM MQ Series, XML, WebLogic & rel technologies. Please send resumes only to: HR, Datamatrix Systems, Inc., 4494 Acworth Industrial Drive, #95, Acworth, GA 30101

Computer Software Associates (ICSA) is looking for IT professionals to customize applications for clients and business develop and operation analyst to promote IT business & placement. BS/MS or equivalent required. Must have related experience. Please contact: raghu-ponnala@icsa-us.com EOE

Perry Johnson Registrars is looking for programmer analyst and DBA to design data center, Spanish version Web for Latin/Spanish business. BS or equivalent with experience is the minimum requirement. Candidate must be fluent in Spanish. Please contact: pjr@pjr.com EOE

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(Glen Mills, Pennsylvania and other locations through the U.S.) Design, deliver and develop cost-effective, high-performance technology solutions to meet challenging demands utilizing Production Planning, Materials Management and Shop floor Management. Use Object-Oriented Development (Java, Visual Basic) JSP, Oracle and Rational Rose UML to customize Change Management, Document Management and BOM Management user interfaces through template processors. Utilize knowledge in all facets of project lifecycle development, from initial feasibility analysis and conceptual design through documentation, implementation, enhancement and support. Assess the infrastructure and network architecture for divisions and recommend To-Be Infrastructure/architecture to support the DS PLM (Design, Manufacturing and Quality Management) application. The wage offered is $82,200 per year. The work schedule is Monday-Friday, 9:00 am to 5:00 pm.

The minimum requirements are as follows: Bachelor's degree in Computer Science, Engineering (Any), Math, Information Systems or Business Administration + 2 years of experience in the job offered or 2 years of experience as a Senior Consultant, Developer or Production Engineer. Related experience must include at least 2 years of experience with PLM (Design, Manufacturing Processes and Quality Management) Oracle and Object Oriented Development (Java, VB).

Please send your resume, referencing Job Order Number WEB422173 to the PA Careerlink, FLC Unit, 235 W. Chelten Avenue, Philadelphia, PA 19144. EOE.

IT PROFESSIONALS

Senior Manager

(Glen Mills, Pennsylvania and other locations through the U.S.) Responsible for leading Supply Chain Management engagements for Fortune 500 companies including proposal development, sales and project execution. Provide Outsourcing Advisory and Strategic Procurement Services for clients' critical business functions in the areas of IT operations, Care Centers, and Communication Networking. Utilize knowledge of wireless, wireline and financial services to conduct Financial Modeling, Cost of Ownership Modeling, Financial Engineering, Lease vs. Buy Cost Benefit Analysis and Activity Based Costing. Lead vendor Contract Negotiations including the development and negotiations of Master Service Agreements, Service Level Agreements, Statements of Work and Large Project Features for complex sourcing and outsourcing engagements. Lead Telecommunications engagements involving voice and data network architecture, optimization strategies, cost structure and cost reduction strategies. Conduct IT assessments of clients' IT organizational structure and Data Center Operations. Responsible for leading large Strategic Sourcing engagements including RFX development, RFX Evaluation and Contracting. Responsible for sourcing the following major categories of production and services: Contract Labor, IT Sourcing, Data Network Services, Voice Network Services, Directory Assistance, Telemarketing Services, Hospitality Services, Wireless Cell Site Equipment, Office Equipment, Installing Services for Communication Providers, Cable Modems, Cable Modem Termination Systems, Videoconferencing, HVAC, IT Equipment and Advertising (Creative and Pre-Print).

WAGE: $147,000/year
Hours worked: Monday-Friday, 9:00am-5:00pm

The position requires a Bachelor's degree or equivalent in Engineering (any type), Business, Computer Science or Information Systems + 4 and a half years of exp. in the job offered or 4 and a half years as a Senior Manager, Manager, Project Lead or Value Analyst/Contract Negotiator. Experience must include as least one year of experience with Wireless, Wireline Services and Financial Services Industries including: Leading Large Project Features, Leading Supply Chain Management engagements, specifically around Strategic Procurement and RFX development, evaluation and contracting. Leading Telecommunications engagements specifically around voice and data network architecture, optimization strategies, cost structuring, and cost reduction strategies. Financial Modeling, including Cost of Ownership Modeling, Financial Engineering, Lease vs. Buy Cost, Benefit Analysis, and Activity Based Costing. Demonstrated ability leading complex Contract Negotiations and preparing Service Level Agreements, Statements of Work, Master Service Agreements, and Expertise in the sourcing of major categories of products and services including: Contract Labor, IT Sourcing, Data Network Services, Voice Network Services, Directory Assistance, Telemarketing Services, Hospitality Services, Wireless Cell Site Equipment, Office Equipment, Installing Services for Communication Providers, Cable Modems, Cable Modem Termination Systems, Videoconferencing, HVAC, IT Equipment, and Advertising (Creative and Pre-Print). Employer regards a foreign degree as equivalent to a US Bachelor's degree as determined by an accredited education evaluation service.

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Technical Architect wanted to work in Manna Del Rey, CA to be responsible for project life cycle and business development; assist with definition and scope of work and design systems and large modules; perform daily coding, ensure timeliness and quality of deliverables; provide solutions to technical problems associated with special projects; attend practice development meetings; define and lead internal activity in area of focus; utilize J2EE, .NET, Win NT/XP, Solaris, AIX, scripting, clustered n-tier architect and wireless network (802.11b, HTTP & WAP) in everyday duties. Requires at least a Bachelor's degree in Computer Science or Engineering with at least one Bachelor's degree level or graduate level course in each of the following: Advanced Computer Architecture and Object-Oriented Programming, and two years of employment experience in the position offered or two years of employment experience as a Systems Analyst utilizing Java and designing e-business web sites. Send resume, copies of diploma, transcripts and salary requirements to: Todd McNichols, Proxicom, Inc., 4061 Glencoe Ave., Manna Del Rey, CA 90292.

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Mechanical Research Engineer. Under direct supervision of Information & Communication Systems group leader, utilize systems analysis/design & engineering/mathematical software to provide scientific/technical algorithms & software development support for applied research & development activities via state-space modeling, system identification, acoustic modeling & control software design & implementation. Must have: Bachelor's in Mechanical Engineering, 1 yr. exper. in job offered or 1 yr. exper. in Research & Development. Research & development using engineering mathematical & acoustic modeling & control software. Salary: $77,550/yr., 40 hr/wk, M-F, 9 a.m. - 5:30 p.m. Submit two (2) resumes to Case # 200204181, Division of Career Services, Labor Certification Unit, 19 Staniford St., 1st fl., Boston, MA 02114.

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Software engineer to design, develop and test computer programs for business applications, analyze software req. to determine feasibility of design, direct software system testing procedures using expertise in PeopleSoft GradeBook, Campus Community Contributor Relations and Financial Aid Modules. Requirements: Bachelor's Degree or equiv. in Computer Science or related field and one year exp. as a software engineer or computer programmer, knowledge of PeopleSoft GradeBook, Campus Community Contributor Relations and Financial Aid Modules. Salary: $70,242/yr. Working Conditions: 8 AM to 5 PM, 40 hrs/wk, involves extensive travel and frequent relocation. Apply: Fayette County CareerLink, Attn: CareerLink Program Supervisor, 135 Waylan Smith Dr., Uniontown, PA 15401. Job No. WE5424474

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Insourcing

IT manager said. In particular, bank officials may be willing to leave some IT infrastructure support responsibilities in IBM's hands, he added.

A consultant who works closely with J.P. Morgan Chase said he has been told that the bank wants to reclaim all of its network support activities "but allow IBM to continue to manage some of the data center infrastructure work" now handled by the company. He also asked not to be identified.

Tom Johnson, a spokesman for J.P. Morgan Chase, said the bank "can't comment on future negotiations." He did confirm that J.P. Morgan Chase and Bank One plan to complete the acquisition next month, although it's expected to take until 2007 to fully merge the operations of the two banks.

IBM declined to comment by press time about the situation at J.P. Morgan Chase, despite repeated requests for a statement from the company.

It was unclear whether there is any dissatisfaction among J.P. Morgan executives regarding IBM's performance, or if the expected move to reduce the scope of the outsourcing deal is related only to the Bank One acquisition. But a rethinking of the contract with IBM has been seen as a possibility since the merger plan was announced in January (QuickLink 44122).

The setup of J.P. Morgan Chase's postmerger management hierarchy is expected to play a pivotal role in any negotiations with IBM as well as in future outsourcing-vs.-insourcing decisions. William Harrison Jr., J.P. Morgan's CEO, will initially head the combined company. But in 2006, Harrison plans to give up the CEO job to James Dimon, his counterpart at Bank One, while staying on as chairman.

Chicago-based Bank One has brought most of its IT operations back in-house since late 2001 as part of an initiative spearheaded by Dimon and managed by CIO Austin Adams (QuickLink 25374).

Future Leadership

Both Adams and J.P. Morgan Chase CIO John Schmidlin will be members of the combined bank's executive committee. No announcement has been made regarding which of the two CIOs will head IT operations after the merger.

However, some industry sources said they expect Adams to get the nod for CIO because of his extensive merger integration experience at the former First Union Corp. prior to joining Bank One in March 2001.

Analysts who track IT issues at financial services firms agreed that a Dimon/Adams combination in the CEO and CIO jobs likely would push J.P. Morgan Chase to do more technology work in-house.

"If Adams and Dimon end up at the helm, the trend toward insourcing will be adopted by the combined institution," predicted Jim Eckenrode, an analyst at Needham, Mass.-based TowerGroup.

Bill Bradway, an analyst at Financial Insights in Framingham, Mass., said he would expect J.P. Morgan Chase and Bank One to examine "every major relationship" that they have with IT vendors and other suppliers once the merger is completed. **47508**

J.P. Morgan/IBM Outsourcing Deal

TERMS: A seven-year contract, signed in December 2002, that's valued at more than $5 billion and replaces traditional fixed-cost provisions with variable pricing based on capacity needs.

ACTIVITIES COVERED: Management of the bank's data processing infrastructure, including data centers, help desks, distributed computing installations, and data and voice networks.

AFFECTED PERSONNEL: About 4,000 J.P. Morgan Chase employees and contractors who were transferred to IBM during the first half of 2003.

STILL DONE IN-HOUSE: Application development and delivery, and desktop support.

Continued from page 1

EDI

are exploring XML-based alternatives.

"A few years ago, everyone was making claims that EDI was on its deathbed and XML was the greatest thing since sliced bread," said Jay Herman, EDI coordinator at Knouse Foods Cooperative Inc. in Peach Glen, Pa. "Internet EDI and competition have brought the cost of transactions down, and EDI volume continues to increase."

One of the most influential companies driving new technology trends is Wal-Mart. But during a panel discussion at the conference, Teresa Breshears, a senior business analyst at the Bentonville, Ark.-based retailer, said it has no plans to move away from standard EDI transactions.

"If there's a need, we will come up and do XML," she said. "But right now, I don't see us migrating away."

The far bigger trend in EDI for the past 18 months has been sending EDI transactions over the Internet using the Applicability Statement 2 protocol, which describes how to send data securely and ensure that messages are received.

Wal-Mart in September 2002 asked its suppliers to shift from value-added networks (VAN) to AS2. But few companies drive change to the degree that Wal-Mart does. Several users said they have moved to AS2 with only one or a handful of trading partners, although they expect more to follow.

Henry Figura, IT officer at Recochem Inc., said management had to be convinced that it needed to invest in AS2 software from Inovis Inc. to comply with just one customer. Now the Montreal-based producer and distributor of chemical products hopes more customers follow suit with AS2, since the company has cut its VAN costs by 20% for its 800 transactions per month with Wal-Mart.

Piggly Wiggly Carolina Co. has cut costs by 70% since going from a VAN to AS2 with 200 of its 600 trading partners, according to Kathy Davis, a lead systems analyst at the Charleston-based grocer.

Cost Considerations

But some companies are having trouble cost-justifying such a move. Thomas Moriarty, manager of EDI support at J.C. Penney, said the Plano, Texas-based retailer analyzed a potential move to AS2, including the cost of software and security, but decided it wouldn't provide a good cost benefit. He said 98% of the company's EDI transactions with its 3,000 trading partners go through VANs.

> **"If there's a need, we will ... do XML. But right now, I don't see us migrating away."**
>
> **TERESA BRESHEARS**, SENIOR BUSINESS ANALYST, WAL-MART

For some suppliers the justification has been tough too. Lorraine Kaleda, an EDI analyst at New York-based L'Oreal USA Inc., said, "To use AS2 would be too costly at this time, because there are only two trading partners we have that are capable of doing this technology."

Upgrading to new versions of documents or adding document types tend to be more common changes for many EDI users. Cynthia Wilson, EDI coordinator at Dallas-based Morningstar Foods, said the number of transaction sets has soared in pricing, payments and logistics areas.

"There seems to be a constant flow of requests from internal business owners as well as customers to increase the amount and type of electronic information exchanged using EDI," Wilson said. "Everyone wants automated, seamless interfacing of data."

Ken Vollmer, an analyst at Cambridge, Mass.-based Forrester Research Inc., estimated that EDI represents 80% to 90% of the total business-to-business traffic, and the number of EDI transactions is growing 3% to 5% every year.

At J.C. Penney, the growth rate has been much higher, as more internal business units adopt EDI. Moriarty said there were 5.5 million EDI documents communicated to trading partners in May of this year compared with 4.7 million in May 2003 — a 17% increase.

Some companies are seeing increases in EDI trading partners. Brian Akabane, a consultant in IT business development at Kansas City, Mo.-based Hallmark, said the company has added 10 retailers and about 30 suppliers to its EDI trading partner base of over 290 during the past three years.

"I don't really see it going away at all anytime soon," Akabane said. He added that Hallmark has four trading partners on AS2, expects to add four more this year and predicts that the number will double each year thereafter. **47503**

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Wage Reality

ARE U.S. IT WORKERS GROSSLY OVERPAID? That's what some Canadian CIOs claim [see "Canadian IT Execs Say U.S. Peers Are Overpaid," QuickLink 47346]. But what else can they say? One IT compensation survey done by Canadian Pacific Railway finds that Canadian IT people make as little as 80 cents for every dollar U.S. IT workers get, after adjusting for currency exchange rates. A Canadian outsourcer puts it at closer to 70 cents on the dollar. If they don't say U.S. IT workers are grossly overpaid, the obvious conclusion is that Canadian CIOs are grossly *underpaying* their own IT people.

Which is it? Neither, of course. That's not how the market works.

And it's the market that determines how much any group of IT workers gets paid. Why do U.S. IT people get more for the same work than Canadians? For the same reason that IT people in New York or San Francisco get more than their counterparts in Pittsburgh or Omaha. They're in different local markets, and they get paid whatever the local market will bear.

Employers everywhere want to pay as little as they can. Employees want to get as much as they can. But it's the almost infinite complexity of the market that actually determines just how much any individual IT worker gets paid — a swirling mix of supply, demand, skills, history, corporate culture, tradition, timing, age and geoder (even though those two aren't supposed to matter), reputation and salesmanship (on both sides) and, yes, location.

That's why one employee gets paid more than another doing exactly the same job. Add up all the IT people in one company or city or region, and you have the imaginary "average" IT worker. Is be overpaid? Underpaid? Unless we're talking about the boss's nephew or wages that are fixed by law, those words are meaningless. If the market determines IT compensation, then IT workers are just paid what they're paid.

So Canadian IT people aren't underpaid. U.S. IT people aren't overpaid. And if someone claims they are, it's either self-serving rhetoric or a sad sign that someone iso't very market-savvy.

Yes, of course, you knew all that. But it's easy to get sucked in by that kind of talk — especially these days, when everyone involved in IT staffing is looking for ways to beat the market.

One obvious way, of course, is offshoring or nearshoring. U.S. companies like the idea of sending work to places where local market rates for IT work are lower, such as India, Russia and, yes, Canada.

Just as obvious is importing talent. Many IT workers with in-demand specialties from Canada, Russia and India want to come upmarket to the U.S., where they get an automatic bump in salary just for being in a different local market.

But changing locale isn't the only way to beat the market. Remember, you can't change what the average IT worker gets paid in your local market. But that average IT guy is imaginary. If you're making IT staffing decisions in the real world, you can beat the market by *avoiding* what's average.

Maybe that means looking for below-local-market-price IT talent from groups where supply is high and demand is low. Older workers. Or wet-behind-the-ears students. Or workers who have been unemployed for a while and are getting desperate.

Maybe it means tightening up your hiring process. Remember, half of all IT workers are below average. If you hire only people in the top half — at market-average rates — you get a lot more bang for your buck.

Maybe it means hiring part-timers or supporting job sharing. Maybe it means using layoffs and reorganizations to cut deadwood, not just head count.

What will work for you in your local IT labor market? You'll have to figure that out for yourself. But it all starts with keeping in mind how the market — and your market — works. 47474

Not Quite Right

This company's new integrated messaging system lets users click on in-box items to listen to phone messages through the speakers on their PCs. "This worked great for people who had their PCs on top of their desks," says a pilot fish working there. "But most people don't. On Day 1, more than one person was seen bending over and straining to hear his voice messages coming from under his desk."

Not Quite Enough

During surgery, this surgeon always forgets to name the other doctors present when he dictates the operative report to the surgical recorder. "So to get the residents to show up on the report, his secretary was printing it out and typing in the names with a typewriter," says an IT support pilot fish. When the year-end accreditation report is run, some of the residents are credited for their cases with the surgeon. "The world met unfortunate who," fish says. "We had to explain that just typing the name of the resident on the paper copy does not get this information into the database."

SHARK TANK

Not Quite Dead

Frantic user grabs pilot fish on the way out the door, saying her laptop's floppy drive is dead. "Not wanting to go back and unlock our support room, I opened my laptop bag and exchanged drives with her," fish says. But for fish, the drive works fine. "I kept using it until the user never reported a problem," fish says. "Again, I exchanged drives, and everyone was happy. I haven't received a replacement drive in the past year, and our users are divided over the myth that we give them our best hardware problems."

Not Quite Safe

Pilot fish's company uses e-mail to remind laptop users to download virus-definition files to prevent network crises. "But they have to remember to do this," fish says. "I try to point out this problem to a specific guy, but he says he's too busy right now because he's off to clean the boss's laptop, which was just infected by a virus from someone else's laptop on the network."

Not Quite Clear On the Concept

[illegible] and the sales of [illegible] is a new line of [illegible] that [illegible] the [illegible] [illegible] fish. The presentation stops while the [illegible] quite emphatically. Right, a pilot fish on the scene. "Turns out this was the first time anyone had heard of the new screen-saver feature we designed into the product."

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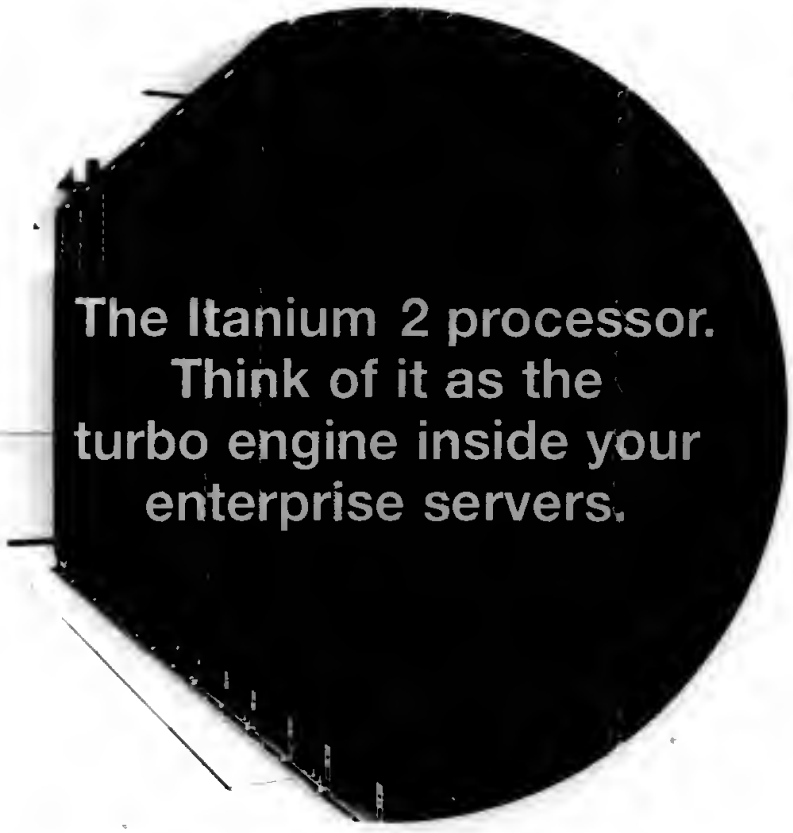

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